

HOW TO: **SPEED UP YOUR MAC** p.100

# Macworld

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The Mac Experts

# 58 » Our Editors Pick the Hottest Hardware & Coolest Software Best Mac Products



**REVIEWED**

5 Photo Printers





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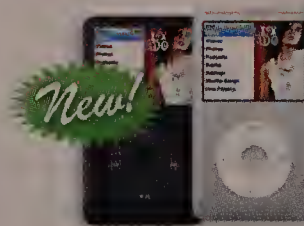


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#### OPINION

#### 13 From the Editor's Desk

When we're deciding which products deserve our Editors' Choice Awards, "useful" trumps "shiny and new."

#### 23 Feedback

Readers respond.

#### MAC BEAT

#### 32 Apple's Ad Game

The company's approach to marketing varies according to product line.

#### 34 Fortune-Tellers

Our predictions for what to expect in 2008.

#### 38 Apple Releases Final Cut Express 4

An update to the video-editing program drops the price by \$100.

#### 44 Hot Stuff

Check out the cool products we're into right now.

#### REVIEWS

#### 46 Great Pictures, Small Packages

Portable photo printers help you get the most out of your digital camera by printing photos quickly and easily on the spot. We take five for a test drive.

#### 56 [macworld.com/reviews](http://macworld.com/reviews)

We're constantly reviewing the latest Mac hardware and software on Macworld.com. Here are quick summaries of this month's online exclusives.

#### 62 Top Products

Looking for a new printer, monitor, digital camera, or other hardware? Check out our current favorites, as well as a complete listing of all current Macs and iPods.

#### 66 Mac Gems

Extend your Dock by creating an extra spot to store your favorite things, convert your audiobook CDs to true digital audiobooks, and make a bootable copy of your hard drive.



**On the Cover**  
Photography by Peter Belanger



**COVER STORY****72 The Best of the Best**

*Macworld* editors tested hundreds of gadgets, programs, and Web sites to find the best and most innovative Mac products of the year—and the results are in. See which products rose to the top in our 23rd annual Editors' Choice Awards.

**88 Plays of the Year**

We also pick the year's best iPod accessories...

**94 The Game Hall of Fame**

... and the most addictive Mac games.

**SECRETS****100 Working Mac**

Whether Web browsing takes forever or your whole system is just running too slowly, here's how to put some zip back into a sluggish Mac.

**106 Playlist**

Modernize and preserve your analog recordings by digitizing them with inexpensive hardware and easy-to-use software.

**112 Mobile Mac**

When you're traveling with a group, it isn't always easy for everyone to get online. Use a cellular router to set up your own portable hotspot.

**114 Geek Factor**

Learn how to use two cool new scripting tools—variables and looping—to get the most out of Leopard's Automator.

**HELP DESK****118 Mac OS X Hints**

Access minimized and hidden windows, control your music remotely with iChat, learn your way around the new Leopard Finder, and more.

**122 Mac 911**

Make Web-page printouts legible, reply using the right e-mail account, stop an incessant password prompt, and more.

**BACK PAGE****156 Spotlight**

If you're the go-to Mac-support person for your family and friends, you need to upgrade them to Leopard ASAP.

**100**  
Fix Mac  
Slowdowns**MACWORLD.COM'S TOP 5**

The top 5 stories on Macworld.com are:

- 1 Analysis: The End of Netinfo**  
Netinfo is DOA, and John C. Welch offers to bury it ([macworld.com/2801](http://macworld.com/2801)).
- 2 Computerworld: Leopard Hits and Misses**  
A blow-by-blow look at what works and what doesn't in Leopard ([macworld.com/2802](http://macworld.com/2802)).
- 3 Apple Updates MacBook, MacBook Pro**  
Both Mac laptop lines get a speed bump and other upgrades ([macworld.com/2803](http://macworld.com/2803)).
- 4 Study: Internet Could Run Out of Capacity in Two Years**  
Research points to possible brownouts in the near future ([macworld.com/2804](http://macworld.com/2804)).
- 5 Apple Releases iPhone Software Update 1.1.2**  
Update offers some new features and a variety of bug fixes ([macworld.com/2805](http://macworld.com/2805)).

(Ranking valid as of November 26, 2007.)



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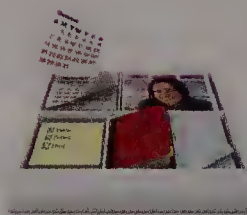
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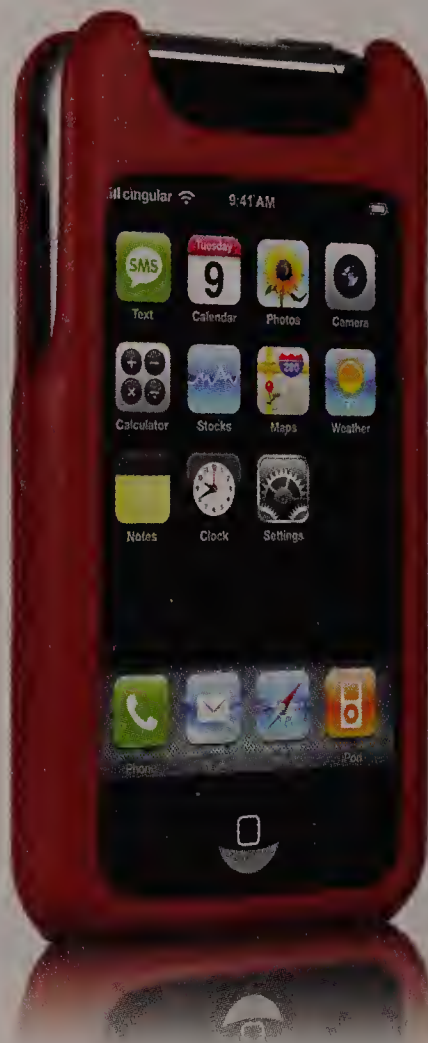
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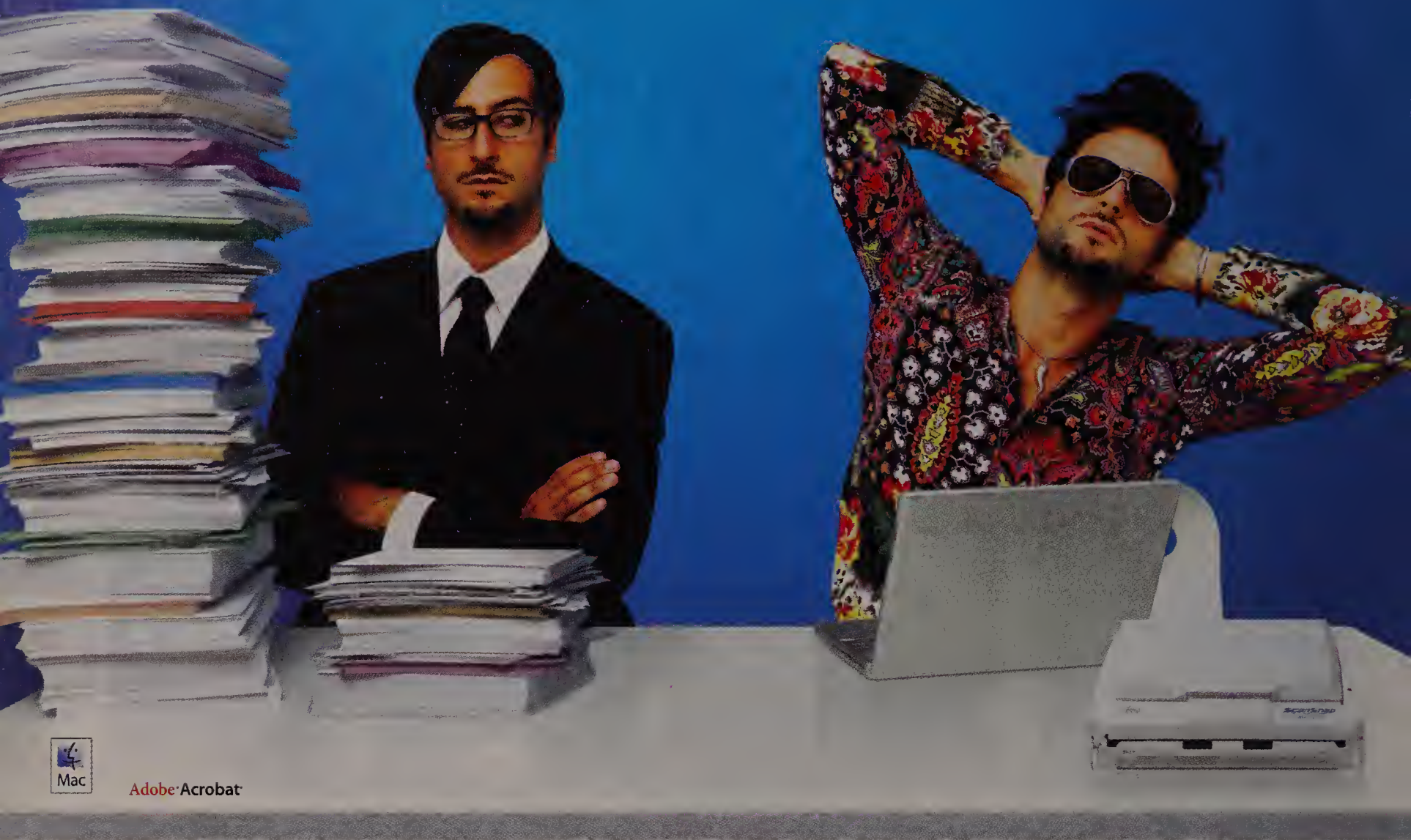
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# Products We Love

Forget the latest and greatest—give me technology that makes my life better.

Over the years, I've learned that our readers contain multitudes. Some of them are incredibly excited by the latest Macs, powered by the newest chips and running the most up-to-date software. But a lot of you aren't so fixated on new technology for its own sake. You just love your Mac because it improves your life.

## Roll Out the Awards

You might assume that this issue of *Macworld*—packed with our annual Eddy Awards (page 72), our Plays of the Year (page 88), and our Game Hall of Fame inductions (page 94)—is a celebration of all that's new and shiny in the world of Macs. True, any coverage of the best products of the year will naturally focus on new stuff. If not, we'd just give the Best Mac award to the Mac IIci every year and knock off early. But when *Macworld*'s editors sit down to pick our favorite products, newness and shininess take second place to practicality.

As I look through our list of 32 Eddy winners, I'm struck by how many of them I actually use every day, and how many of them have changed my life for the better. The iPhone, for example, has actually made me reliably reachable by phone for the first time in my life. I use HandBrake to put my DVDs onto a video iPod so my kids have something appropriate to watch on long plane trips. Red Sweater Software's MarsEdit has become my de facto writing tool for my various blogs. And back in November, I joined tens of thousands of other people in committing to write 50,000 words of fiction in just 30 days for National Novel Writing Month ([nanowrimo.org](http://nanowrimo.org)). For those 30 days, I used Literature & Latte's Scrivener to write my story and keep track of way too many characters and plot strands.

I could go on, and so could the rest of the editors and writers here at *Macworld*. A product can't win an Eddy



**When we pick our favorite products, “new and shiny” takes second place to “practical.”**

Award without passionate *Macworld* editors laying out a compelling case for its inclusion. We feel passionately about these products because they've made our work or personal lives better in a significant way. I hope they'll do the same for you.

## Taking Pictures

As I was reflecting about products and technologies that have changed our lives, I recalled a conversation I had with my wife six years ago, as we were expecting our first child. We were debating whether to buy a digital camera. What strikes me now is that we made the decision largely by comparing the cost of printing photos from film at the local drugstore with the cost of ordering prints of digital photos from an online service.

When I think back on that conversation, our carefully calculated cost analysis seems laughable, because we've stopped ordering prints altogether. We've opted instead for Web photo galleries and semiannual iPhoto

books. These days, I am astonished when I see someone taking snapshots with a film camera.

Today's digital cameras and photo software give us staggering flexibility and quality. But both come at a price: the hardware and software aren't always as easy to use as they could be. And beyond that, photography is still as much an art as a science: it's just as easy to take bad pictures on a \$1,000 digital SLR as on an old 35-millimeter film camera.

That's why *Macworld* writes about digital photography on a regular basis, and I suspect it's why the *Macworld Digital Photography Superguide*, released back in 2005, has been a very successful book. But two years is a long time when it comes to digital photography. So we've updated our guide, creating a new edition full of tips on shopping for a digital camera, shooting better photos, organizing your photo library, editing your images, and then sharing them with the world—on the Web, on paper, in a book, or even on a poster or a set of coasters. If you're interested in ordering a copy—as a downloadable PDF, as a printed book, or even on CD-ROM—check out [macworld.com/3276](http://macworld.com/3276) for a special discount offer for *Macworld* readers.

## Changing the Web

Speaking of rapid technological change, another place you'll find it is on the Web. And we're a part of that change: in mid-December we replaced all of *Macworld.com*—both the design and the back-end publishing technologies—with a new model. We think it's a huge improvement both in looks and in usability, but we also realize it's a work-in-progress. Check it out and let us know what you think—and how you think we could improve it further. ☒

*Macworld* Editorial Director **Jason Snell** could not have written this column without Twitter. Follow him as [jsnell](https://twitter.com/jsnell) on [twitter.com](https://twitter.com), or drop him an e-mail at [jason\\_snell@macworld.com](mailto:jason_snell@macworld.com).



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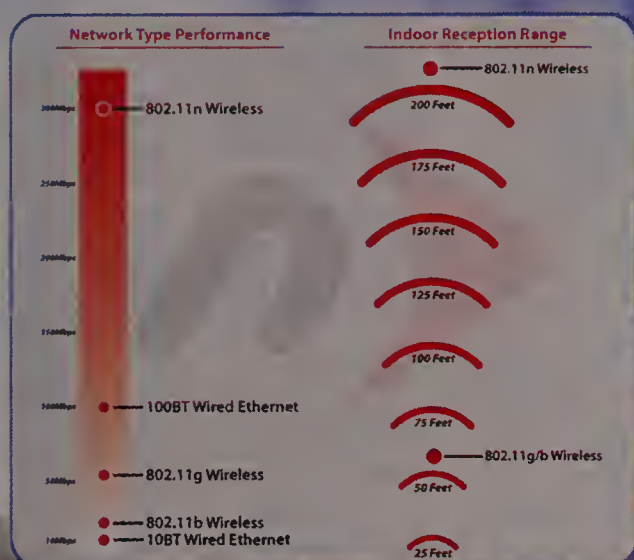
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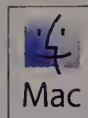
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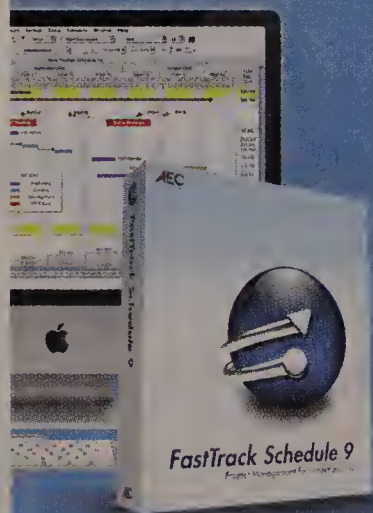
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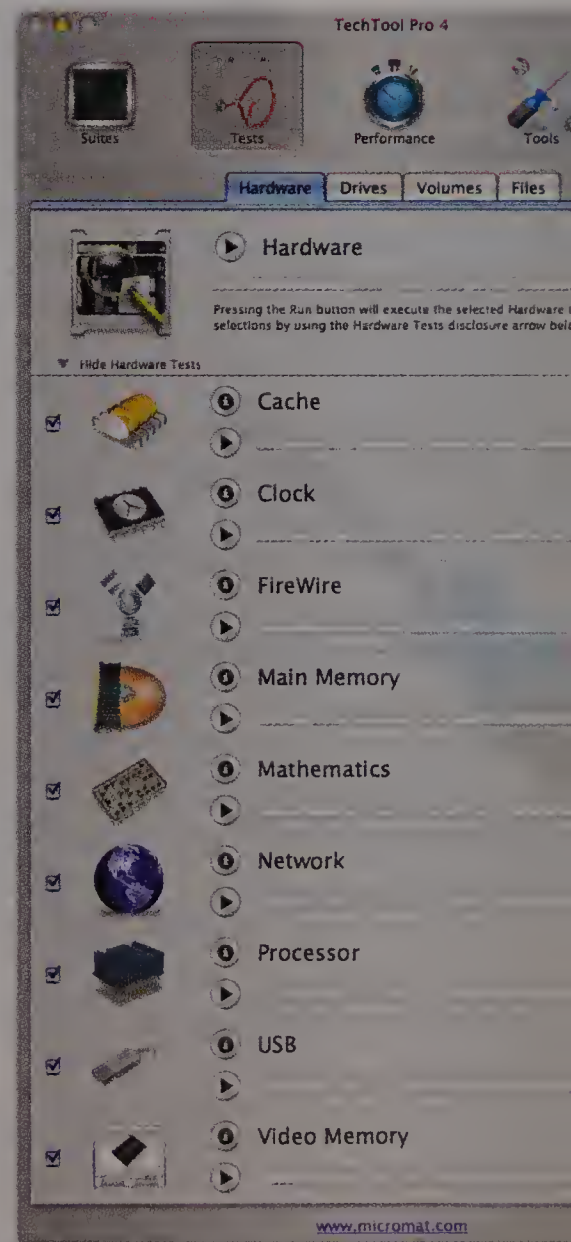
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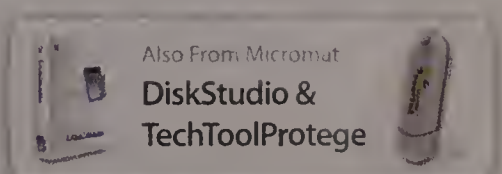
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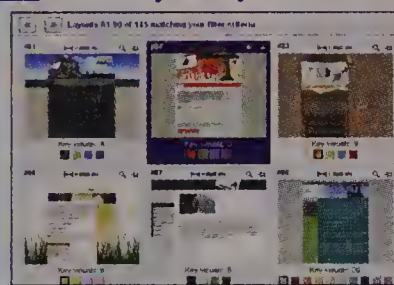
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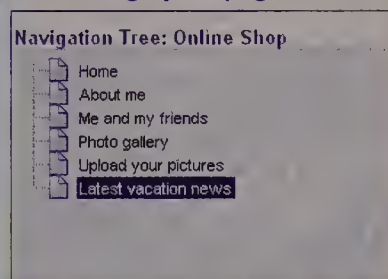
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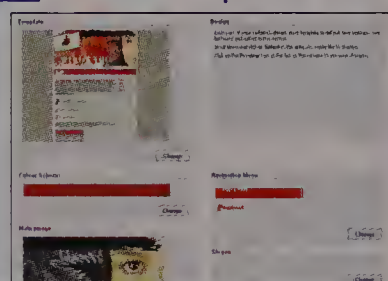
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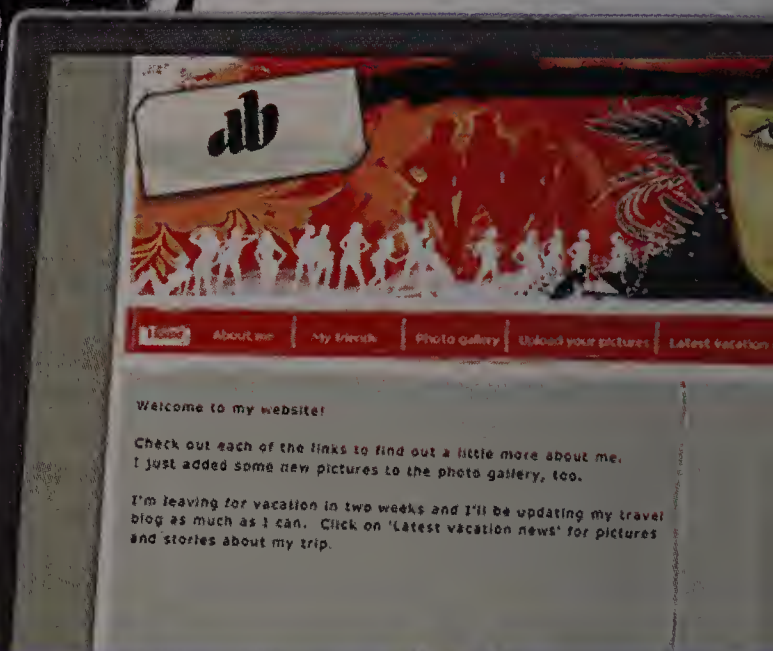
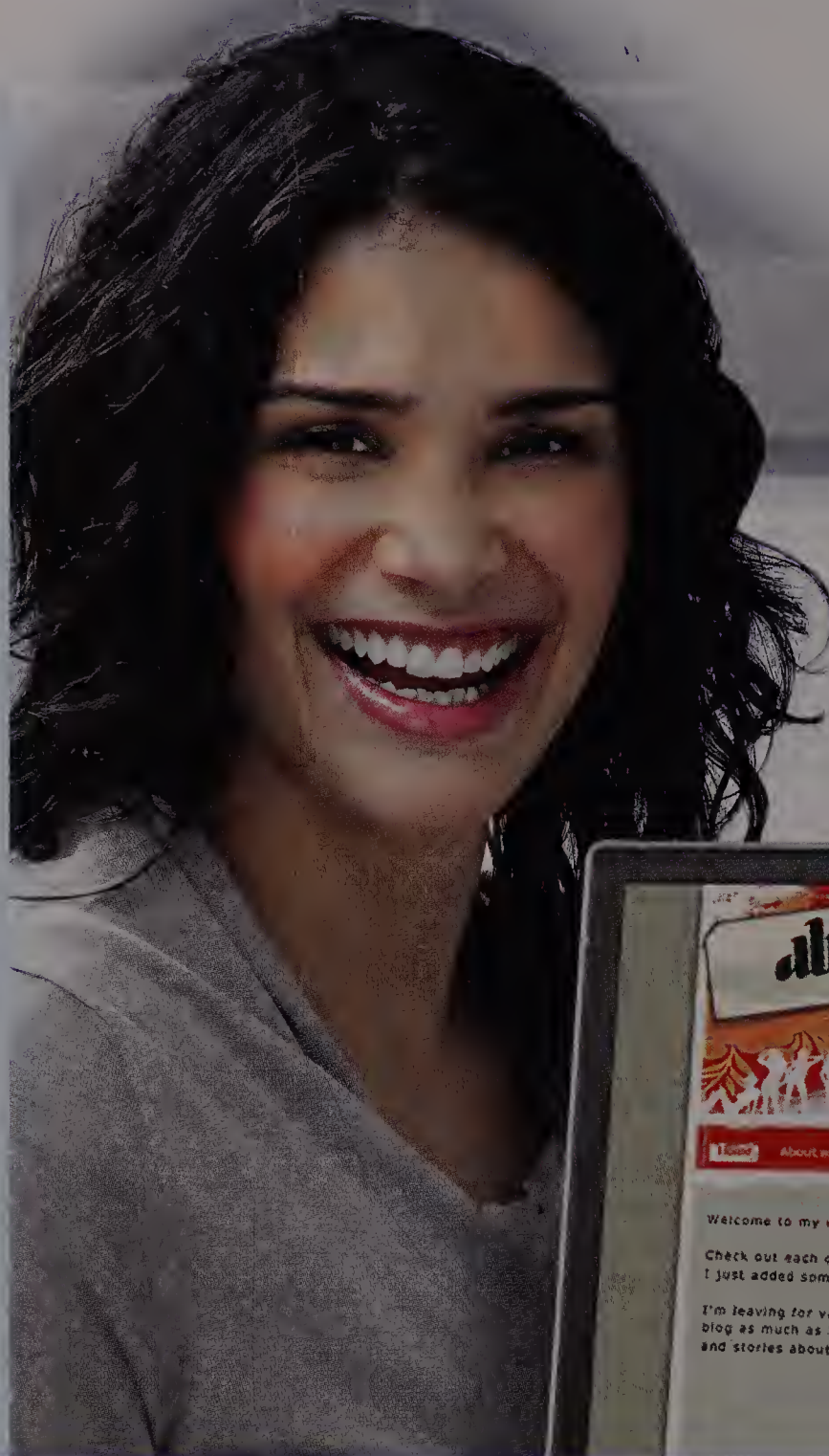
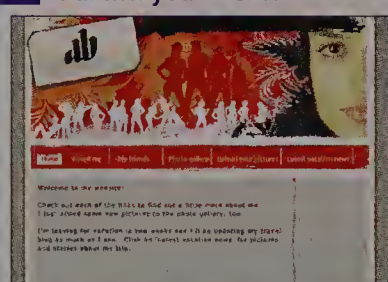
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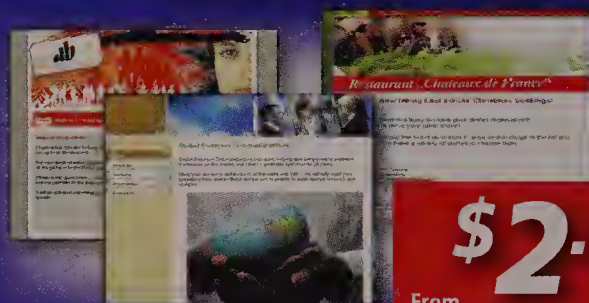


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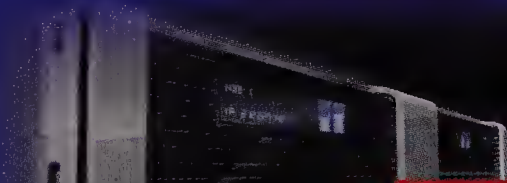
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# The Greatest Threat Is ... You

Reactions to our advice on safer computing, iLife '08, and iWork '08

## Threat Assessments

Joe Kissell's first step in securing your Mac ("Lock It Up!" November 2007) urges the creation of a non-admin account for daily use. He says, "If you want to transfer any data (such as preferences files or e-mail messages) from your current [admin] account to the new [nonadmin] one, drag the items from their current location in your Home folder to the corresponding location in the new account's Home folder." What is the best way to do so? There's more to this process than the sentence indicates, and I'd like to do it correctly.

✉ **Shaun Abshire**

There are several ways to copy files from one user account to another. To avoid most permissions-related issues, I suggest the following. In your old account, drag the files or folders you want to move to the new user into /Users/Shared. (You want to copy rather than move them, so hold down the option key while you drag. Copying instead of moving changes the files' owner to the current user.) Then log in to your new user account, hold down the option key, and drag the items from the Shared folder to their respective locations. Finally, delete the files from the Shared folder.—Joe Kissell



As Joe Kissell suggested in his story about Mac security, I created a new nonadministrator user account for everyday use, then began dragging stuff from my old admin account to the new one. This quickly became a hassle. Then I realized it's much easier to make the new account the admin account and change my old account's status to nonadmin.

✉ **Terry Tanner**

That's a great alternative.—Joe Kissell

OS X [TidBits Publishing, 2007; [macworld.com/3177](http://macworld.com/3177)]). Unfortunately, I didn't have enough space in this particular article to offer every security recommendation I wanted to include. That said, you should be aware that anyone with physical access to your computer can defeat Open Firmware Password protection relatively easily if they know the trick. So although Open Firmware Password is a good idea, it doesn't provide anything approaching ironclad security.—Joe Kissell

In your section on wireless security, you recommended AnchorFree's Hotspot Shield VPN service. But you neglected to mention that the service is free because it's *ad based*. Every site I visited after activating Hotspot Shield had a banner advertisement at the top for more AnchorFree products and programs. I got rid of the service immediately for this reason.

✉ **Jon Leopold**

It is true that Hotspot Shield puts a banner ad at the top of your Web browser window (though it also provides a Close button so you can remove the ad from any page). You get those ads only when



How about recommending that people use Open Firmware Password so intruders can't boot their computers from CDs or other disks?

✉ **Doug Brutlag**

I do indeed recommend that. (See my e-book *Take Control of Passwords in Mac*

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you're browsing the Web; they don't appear in e-mail, RSS readers, or other Internet applications. You could, if you wish, block the ads by using an application such as Hostal (\$9; [www.northernsoftworks.com](http://www.northernsoftworks.com)) and adding box.anchorfree.net to its Blocked Hosts list. However, unobtrusive banner ads seem to me like a fair trade-off for a free

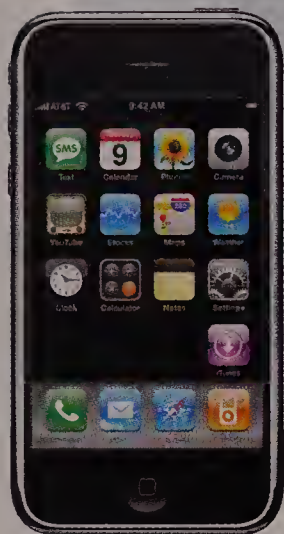
VPN service. PublicVPN.com, a comparable paid service, charges \$6 per month or \$60 per year.—Joe Kissell

My father is a Department of Defense security guru. When my family first starting using the Internet, he made us create and memorize completely random passwords. We had to keep written

copies by the computer for the first week or two, but it wasn't hard to remember them after that. To this day, I use a similar password, in three variations, as well as two alternatives. That little effort at the outset has kept my accounts and logins safe.

☞ Dan Bargaen

## OVERHEARD ON THE FORUMS



If you want to unlock your iPhone and stay at version 1.0.1 forever, go for it; however, Apple has no responsibility to make future updates compatible with your hacked iPhone.

boulder1259  
[macworld.com/3178](http://macworld.com/3178)

**From the iPod's MP4 format to being forced to use AT&T if I want an iPhone, I tire of Apple making compatibility impossible.**

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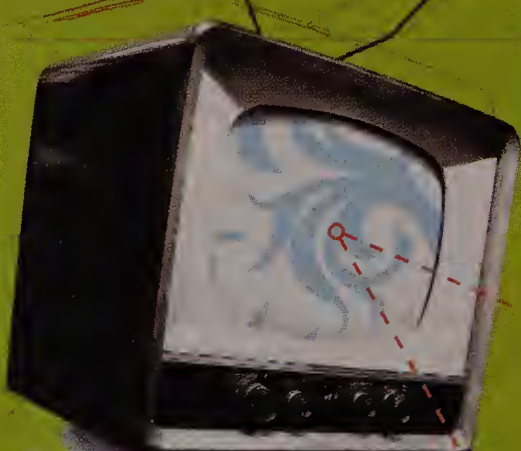
Multiple, unguessable passwords is a nice idea in theory, but completely impractical in reality. I wish I could use them, but the only way they would work for me is if I had all of them written on a list, which would just compromise my security even more. Heck, I've already locked myself out of my computer and Web sites several times because I adopted some new password that was so secure nobody could guess it—not even *me*.

☞ Bryan Senka


### iMovie Devolution

Regarding your review of iLife '08 ("Inside iLife '08," November 2007): I

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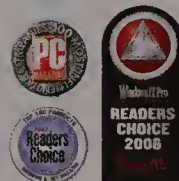
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am disappointed in *Macworld* for not frankly assessing the shortcomings and omissions of iMovie '08. I think Apple has taken a big step backward with this new version, and I know I'm not the only one out there who feels that way. If Microsoft were to make a similar mistake with its new Office software suite, the criticism would never end.

David Cox

### iWork Not Ready for Business?

Jeffery Battersby's review of iWork '08 (November 2007), especially Pages, is much too kind. This edition of Pages is neither a page-layout tool nor a word processor. In fact, for page layout, the new version of Pages is *less* functional than the last. At least the previous version allowed me to create multipage documents without stopping at the end of each page and "creating" a new one. The \$79 I spent on iWork '08 is the worst \$79 purchase

decision I ever made. I wish I could take my money back.

Monroe R. Miller

### Missing the Point

I can't tell you how disappointed I was with your November review of the iPod touch ("New iPods Abound"). I thought for sure you'd see it for what it really is. You dismiss it as a piece of junk that falls short of the iPhone. Well, guess what: it's not the iPhone. I used to think you guys were pretty accurate in your opinions of products, but now I can see I was wrong.

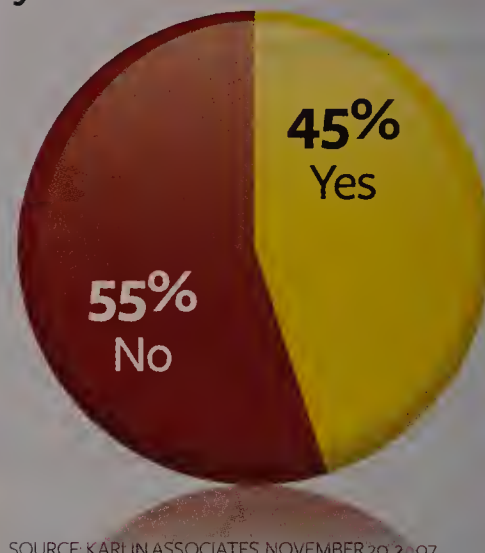
Chris Siverly

### E-Dentity Crisis

About your *Tech Trends* chart in the November *Mac Beat* ("eBrand Emergency"), it's no wonder only 3 percent of the respondents picked Apple as their favorite online brand presence. I've been trying to use Apple's Web site for years and find it one of the most difficult sites to navigate. I can never find what I'm looking for without wasting

## READER POLL

Have you upgraded to Leopard (OS X 10.5) yet?



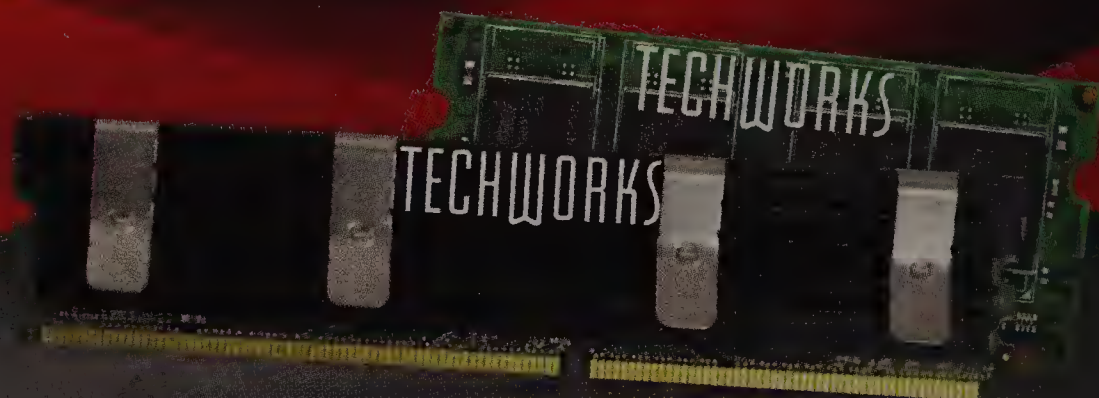
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an enormous amount of time figuring out exactly which keywords I need to use to get in sync with the Webmaster.

George R. Hozendorf

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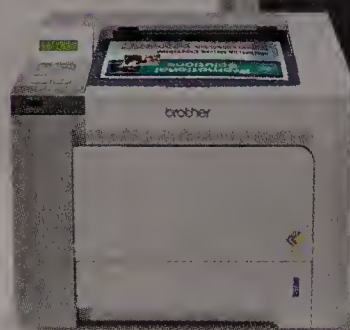




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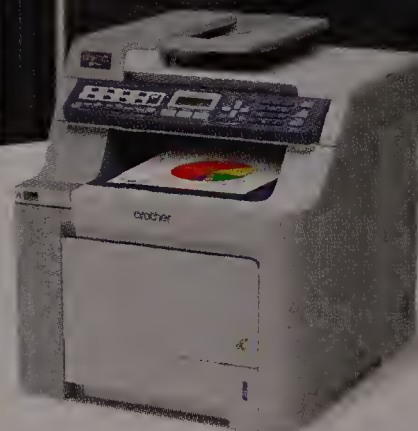


**HL-4040CN**  
Network Ready Color Laser Printer  
**\$399\***

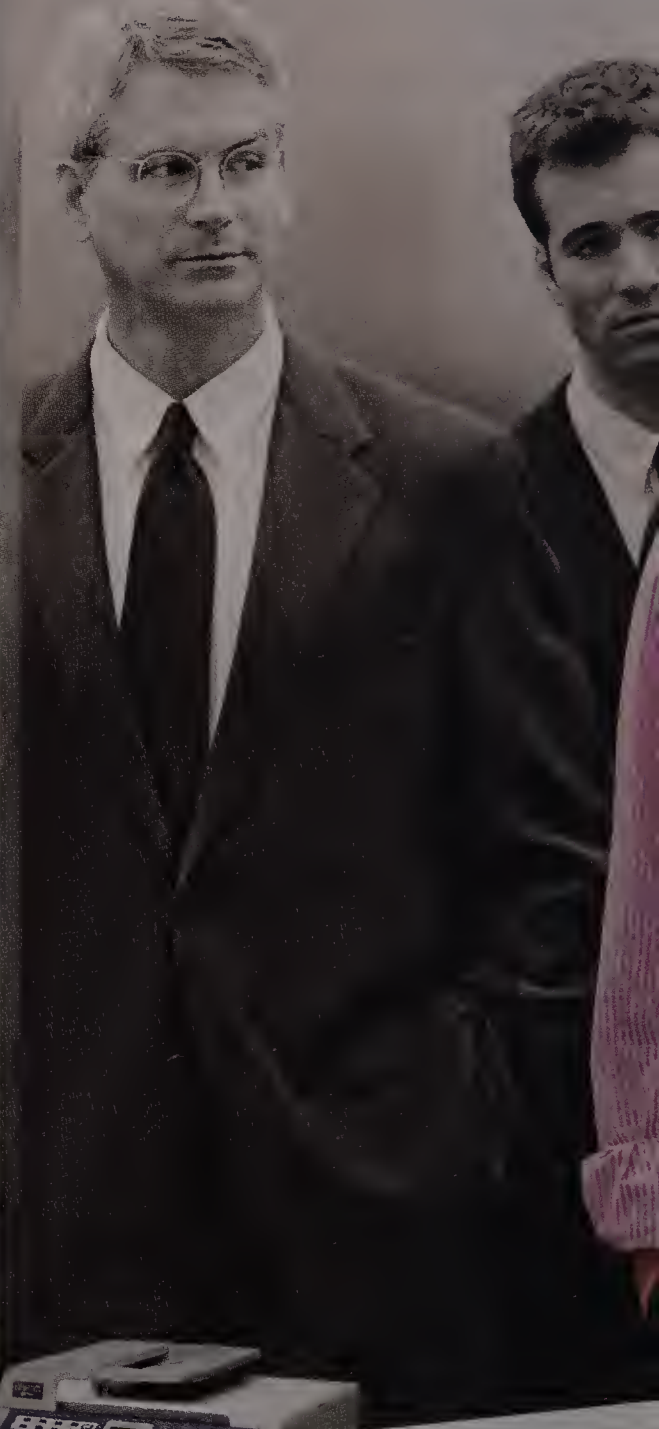


**Up to 21ppm**

**HL-4070CDW**  
Wireless Color Laser Printer  
**\$499\***



**MFC-9440CN**  
Color Laser All-in-One  
**\$699\***







Plan A is following the crowd. Plan A is doing the expected. When it comes to printing, Plan A is not your best choice. It pays to look a little closer and then choose Plan B from Brother.<sup>®</sup> We make printers and all-in-ones that give you more. More features. More affordability. And up to 21ppm color and monochrome output speeds. It's the value we build into all our products. And your reward for being smarter. And choosing Plan B. **Visit us online at [www.brother.com](http://www.brother.com)**

At your side.  
**brother**<sup>®</sup>

**Available at:** Office Depot, OfficeMax, Staples, Fry's Electronics, BestBuy.com, Costco.com, Brandsmart, Microcenter, J&R Computer World, CDW, Insight, PC Connection, PC Mall, Zones, Quill, PC Nation, TigerDirect.com, Provanantage, Amazon.com, Buy.com, Newegg.com and other fine resellers.

\*Estimated street price, dealer price may vary. pages per minute.

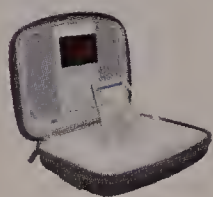
© 2008 Brother International Corporation, Bridgewater, NJ  
Brother Industries, Ltd. Nagoya, Japan



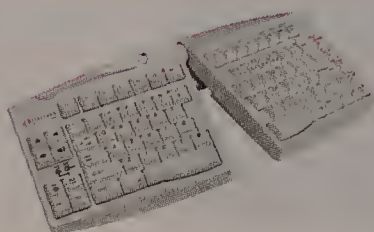


**MARWARE**  
CEO Sleeve for iPhone

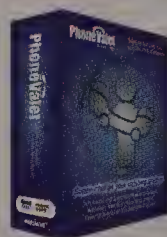
**MICROMATING**  
TechTool Pro 5



**SONIC IMPACT**  
i-F3 iPod Speaker



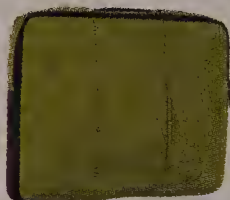
**KEYOVATION**  
Goldtouch Keyboard for Mac



**PARLIANT**  
PhoneValet Message Center



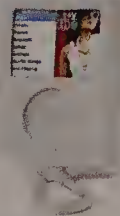
**SENA**  
MagnetFlipper for iPhone



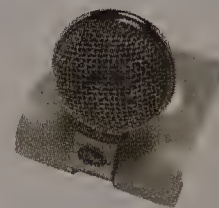
**Brenthaven**  
Eclipse Sleeve



**It's About Time to learn iPhone**



**MOCA**  
Snow Leather Case for nano



**Blue**  
Snowflake USB Microphone



The latest and greatest for Mac, iPod and iPhone

( see them on display at Macworld Expo )

 ifrogz

Wrapz for iPod touch



matias  
corporation

Folding Keyboard



 BookEndz

MacBook Docking Stations



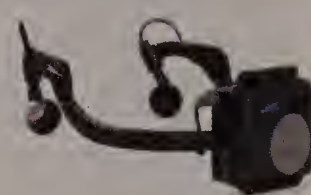
Melissa Beth Designs

Maxwell Metro Bag



iHome

iH9 Clock Radio for iPod



 h2o audio™

iSH2 for iPod shuffle 2G



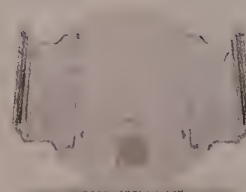
Synium Software

MacFamilyTree 5.0



WI-GEAR

iMuffs Bluetooth Headphones



Air Mount for Airport Extreme



Innoventive  
Software

FrameForge 3D Studio 2

Visit the Dr. Bott booth (#1912) and store at Macworld Expo for these products and much more.  
Dr. Bott distributes compelling Mac, iPod and iPhone products to resellers worldwide.  
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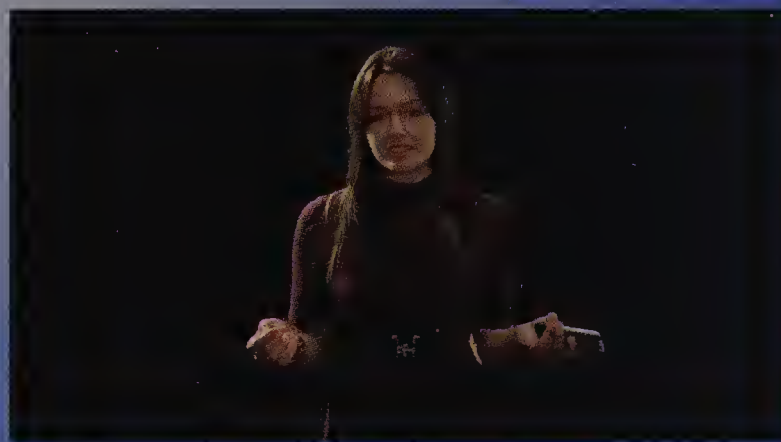
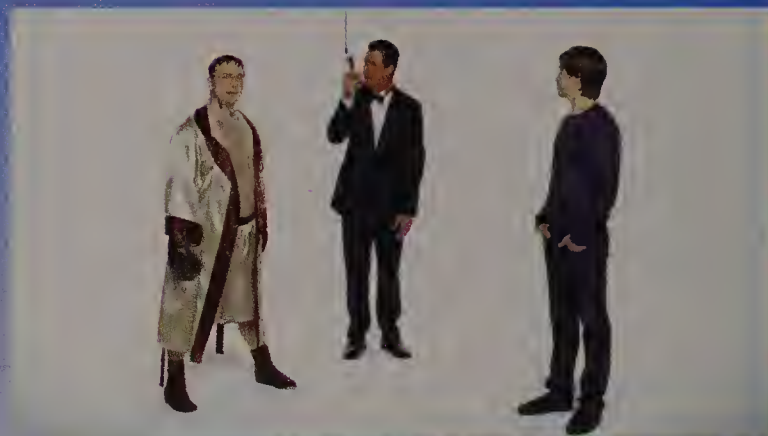


# Mac Beat

BUSINESS

## Apple's Ad Game

How the company tailors its message for each product line **BY DAN MOREN**



**Advertising Options** Apple has created distinctive ads for its product lines, such as the current campaigns for (clockwise from upper right) Macs, iPhones, and iPods.

**A**mong technology companies, Apple is often perceived to have something that the likes of rivals Dell, Microsoft, and Hewlett-Packard lack: that indefinable element of cool. Apple has long been concerned with meticulously tailoring its image, and a cornerstone of building that image is advertising, especially on television. "Apple has a long history of exceptional advertising, starting with 1984," says Ross Rubin, director of analysis at market research firm NPD Group. Hoag Levins, executive producer of *Advertising Age's* online video news department, agrees, calling advertising a "core pillar" of Apple's strategy: "It's bringing new people to Apple products."

Ever since that anonymous runner hurled a hammer through a giant talking head in 1984, Apple's advertising has captured the imagination and attention of consumers around the world. These days, Apple has three major product lines: the iPod, the iPhone, and the Mac. While all three of these prod-

ucts have qualities in common, such as being stylish and easy to use, Apple's television ad campaigns for each one take distinct approaches.

Despite their differences, Apple ads have in common at least one major advantage over many competitors' commercials: regardless of whether you

using a Windows machine either because they aren't aware they have an alternative, or because they're nursing erroneous preconceptions about Macs.

The ads feature actors Justin Long and John Hodgman as the Mac and PC, respectively—anthropomorphized versions of the long-warring computer

### Apple shows off computer features by putting Mac and PC characters into humorous situations.

love or hate the spots, you'll likely *remember* them, and that's the first step to building a successful image.

#### Hello, I'm a Mac

Apple's most recent campaign for the Mac, "Get a Mac," conveys just as simple and straightforward a message as the name would suggest. It's a deliberate attempt to appeal to the vast majority of computer users who, as Apple sees it, are

platforms. Aside from a brief shot at the end, you won't see any actual computers in the "Get a Mac" ads. There's a good reason for that: computer features are hard to show off in a small space in 30-second segments. Instead, Apple shows them off by putting the characters into humorous situations.

For example, when the PC is depicted wearing a leg cast because someone tripped over his power cord, it gives the



Mac a chance to bring up the innovative MagSafe adapter. This strategy is intended to make the Mac's advantages accessible and memorable for the average user. "Apple has had a strong focus on retail and the consumer since Steve Jobs returned," says Rubin. Because of the campaign's reliance on dialogue, Apple has also localized the message for other markets. Both the U.K. and Japan now have their own version of the "Get a Mac" ads, complete with native actors and situations tuned to the nuances of those cultures. It's all part of the attention to detail that Apple knows it must pay in order to compete globally. Levins called the ads "one of the best campaigns of all time. It's an extraordinary advertising event."

### iPod + iTunes

Whereas the "Get a Mac" ads focus on the Mac's features, the advertising campaign for the iPod is about style more than substance. The iPod already has a large pool of both PC and Mac users, and most people know what an iPod is and what it does. Nowadays, the device is so popular, it has become a commodity.

Instead, Apple is looking to convince those in the target audience either that they need an iPod or, as is more and more often the case, that they need a *new* iPod. The campaigns show iPods as fun and hip; in one of the most iconic spots, anonymous silhouettes dance to the beat of a popular new song. "The stark images of the iPod dancers have really burned themselves into your brain," says Levins. Music is an integral part of the iPod campaign, even when the improvements Apple is touting are video related. For instance, the spot for the third-generation iPod nano didn't use a movie or a television show to display its new video prowess, but rather a catchy music video.

### This Is How You Turn It On

Although the iPhone is the newest of Apple's products, it's already been the focus of two separate ad campaigns. The first, which aired around the time of its launch, actually showed the iPhone in action—unique in Apple's advertising.

The commercials showed off the device's features as you might really use them—for example, to look up a restau-

rant in Maps, and then call and make a reservation—while a narrator explains what's going on. The iPhone's interface is very much the selling point, so the ads let the phone speak for itself.

"These ads focused a lot on applications and capabilities; these have been the differentiators for the iPhone," says Rubin. "In contrast to the Mac, where there's a clear alternative that Apple needs to position [itself] against, the iPhone is in a category with very high penetration in the U.S., but it's seeking to break [away] from the pack."

The second campaign relied on the same principle, but in this case featured real users relating their stories about how they use their iPhones. It's reminiscent of Apple's old Switch campaign, in which people who had switched from Windows to Mac shared their stories—and it's no less compelling.

### What's in a Name?

While Apple's ad strategies clearly have some differences, they share an elegant simplicity that echoes the company's own penchant for quality design and user friendliness. "There's an artistic magic to all three of them," says Levins.

The widespread parodies and homages to Apple's various ad campaigns are a testament to their iconic and recognizable nature. Imitations have shown up everywhere from YouTube to *Saturday Night Live*, sometimes with surprising results. Several months ago, Apple spotted a homemade ad for the iPod touch uploaded to YouTube by an 18-year-old student named Nick Haley. Apple invited Haley to come and work with its ad firm, TBWA\Chiat\Day, to produce a professional version, which ended up airing on national television. While the spot, focusing on the features of the iPod touch, has more in common with the iPhone commercials than with the iPod ones, it's easily recognizable as an Apple ad.

Almost all of the ads are shot on a monochrome background, and feature little if any text until the conclusion. And all end with a shot of the Apple logo, unifying the products in the minds of consumers and reinforcing both the brand and its image. ❌

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Dan Moren is a Macworld associate editor.

## NEWS IN BRIEF

### Study Warns Internet Could Run Out of Capacity

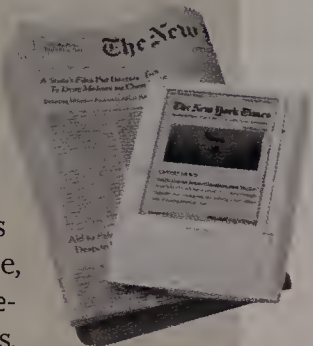
Nemertes Research Group, an independent analysis firm, predicts that consumer and corporate use of the Internet could overload the current capacity and lead to brownouts in two years—unless backbone providers invest up to \$137 billion in new infrastructure. According to the study, "although core fiber and switching/routing resources will scale nicely to support virtually any conceivable user demand, Internet access infrastructure, specifically in North America, will likely cease to be adequate for supporting demand within the next three to five years."



### Amazon.com Releases eBook Reader

The company best known for online books and music sales has released the Kindle, which lets people wirelessly download books, blogs, newspapers, and magazines and read them on-the-go. The \$399 Kindle is about the size of a paperback book and weighs 10.3 ounces, and its screen is designed to look like real paper and ink, allowing users to read in direct sunlight. More than 88,000 books—generally \$10 each—are available in the Kindle store, including most of the current *New York Times* best-sellers and new releases. The Kindle uses an EvDO network and, where available, 3G connectivity. It can hold 200-plus titles internally, and more with additional SD cards.

"Our top design objective was for the Kindle to disappear in your hands—to get out of the way—so you can enjoy your reading," said Jeff Bezos, Amazon.com founder and CEO, in a statement. "We also wanted to go beyond the physical book. Kindle is wireless, so whether you're lying in bed or riding a train, you can think of a book and have it in less than 60 seconds."





## BUSINESS

# Fortune-Tellers

Macworld's eighth annual look at the year ahead

**W**hat's in store for Mac users throughout 2008? We may not know what the future holds, but that doesn't mean we can't take a few wild guesses.



**Dan Frakes**

*Macworld senior editor*

➤ Apple will (finally) bring back the Mac sub-

notebook—a smaller, lighter laptop made for road warriors. The new model will forgo an internal optical drive to achieve a smaller size, but it will also feature new technologies such as a solid-state hard drive, an LED screen, and a low-power processor.

➤ Apple will give us a midrange, screenless Mac—something in between the Mac mini and the Mac Pro—for people who don't want an all-in-one desktop system. It will have a reasonably powerful processor, a decent (and upgradable) graphics card, and room for a PCI card and an additional hard drive. This Mac will be great for “switchers” accustomed to such configurations on the Windows side. It will also be an excellent second Mac for many in the Mac Pro market.

➤ The advent of Leopard, along with a general dissatisfaction with Windows Vista, will open doors for the Mac in the enterprise market. In fact, we'll see a few major U.S. companies switch to the Mac platform—some gradually, but at least a couple in a major public migration. We'll also see a resurgence of the Mac platform in higher education.



**Andy Ihnatko**

*Chicago Sun-Times tech columnist, and former Macworld columnist*

Look at the puzzle pieces. A sophisticated, gesture-based user interface. OS X running on nontraditional devices. A new developer environment and API for iDevices that was so tricky that Apple couldn't release it or even hint at its existence until three months after releasing the iPhone—and even then, the company did so only under duress. Features embedded in Mac OS that help you invisibly tether two OS X devices' resources together, whether they're in the same room or merely on the same planet. A movement from Apple to put the bulk of its energy into consumer products and not computer products.

I'm fairly sure that 2008 will see an entire new platform. The iPhone is a phone, and the iPod touch is an iPhone without the phone stuff. The next *i-Suffix* will be a totally new thing. Not a Mac—not really. An iPhone, kind of, but sort of not. Take the screen off a MacBook and slice it in two vertically. That's the device. It'll play media—including Office files, PDFs, and e-books—from its 16GB of flash storage. It'll have Wi-Fi and Safari, maybe even 3G or EDGE, like an iPhone.

## GAME BUZZ

### Carmack Questions Apple's Commitment to Gaming

John Carmack, founder of id Software, recently criticized Apple's attitude toward game developers, and said that he and Steve Jobs have had “a fairly heated argument” over the issue. In an interview with GameDaily Biz, Carmack said, “I have an iPhone right now, and it's a platform I would enjoy developing for, but Apple is not taking progressive steps in regards to [gaming].” Carmack, whose company has long been known for landmark games such as Quake and Doom, confessed that Apple's iPhone development strategy is working “from a business standpoint,” but said that the iPod is “in many ways ... one of the worst environments to develop games for,” largely because developers have to work on an emulator.



### Casual Games Raking In the Dough

The Casual Games Association has released a report estimating that the casual games market is now bringing in \$2.25 billion per year in revenue, and is growing at a staggering 20 percent annually. More than 200 million gamers play casual games—such as Tetris, PopCap Games' Bejeweled series, the Diner Dash franchise from PlayFirst, and Big Fish Games' Mystery Case Files—on the Internet each month. The report also says that women make up a slight majority of that group, at 52 percent. And they constitute an even higher percentage of casual gamers who pay for their games, at 74 percent. —PETER COHEN



## PRODUCT WATCH

### HARDWARE

**Aria extreme n**, from Sonnet ([www.sonnettech.com](http://www.sonnettech.com)): 802.11n wireless mini-PCIe card replaces the 802.11g AirPort cards that shipped in some Intel-based Macs (\$130).

**Free.1 USB and Free.2 USB phones**, from Ipevo ([www.ipevo.com](http://www.ipevo.com)): Mac-compatible USB handsets work with the Skype voice-over-IP service, with the Free.2 phone featuring a backlit display for viewing caller ID and contact lists (Free.1, \$30; Free.2, \$45).

**LaCie Hard Disk**, Design by Neil Poulton, from LaCie ([www.lacie.com](http://www.lacie.com)): Black USB 2.0 hard drive with ambient blue LED lighting comes in multiple configurations and includes LaCie's 1-Click backup software (320GB, \$120; 500GB, \$150; 750GB, \$250; 1TB, \$400).

**USB DriveDock 4**, from WiebeTech ([www.wiebetech.com](http://www.wiebetech.com)): USB device connects 3.5- and 2.5-inch Serial ATA and 3.5- and 2.5-inch IDE/PATA hard drives to a host computer (\$50).





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## Apple will finally bring back the Mac subnotebook for road warriors.

It will run native software, too. Curious, isn't it, that in October Steve Jobs announced Apple wouldn't be taking the wrapper off the iPhone developers' kit until February? It's almost as if the resources that are plainly available in the SDK would have spilled the beans on the device Steve was planning to unveil during his Macworld Expo keynote in January.

Whatever it is, people will complain that it costs way too much money, and they'll happily stand in line for a minimum of 18 hours to get one.



**Dan Moren**  
Macworld associate editor

> Despite its spats with content providers like NBC, I expect to see a strong push from Apple on the digital video front in 2008, probably involv-

ing a long-awaited update to the Apple TV and a video-rental download service. And perhaps even another open letter from Steve Jobs, containing a list of his all-time favorite romantic comedies.

> With all the work Apple has put into the multitouch interface, which has jumped from the iPhone to the iPod line, the Mac seems a likely next stop. I'm guessing we'll see it in a portable form factor rather than in a desktop. Sorry, *Minority Report* fans; you'll have to wait.

> Even if the iPhone isn't Apple's best-selling product, it's still the most iconic device of the past year, in any industry. As AT&T hinted (see page 40), look for Apple to capitalize on that momentum with a second-generation iPhone, based (at last) on third-generation wireless technology. But the real question remains to be answered: "Will the iPhone 2.0 cook me dinner?"



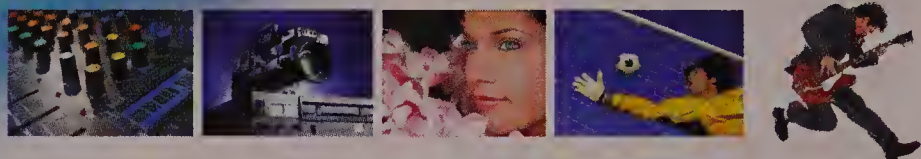
**John Moltz**, Crazy Apple Rumors editor in chief ([www.crazyapple.com](http://www.crazyapple.com))

> At Macworld Expo in January, Steve Jobs will unveil a wafer-thin, 13-inch Mac laptop based on flash memory, with 12 hours of battery life. The resulting nerdgasm will shatter the glass exterior of Moscone West.

> Apple will release a tablet device with pen-based input capability. The device will be called "The First Person to Call It a Newton Gets Socked in the Throat."

> Apple will introduce another line of consumer products, this time in the realm of dental care. The Apple Toothbrush will include the first user-friendly application of DRM—dental rights management. Using its patented Fair-Brush technology, each Apple Toothbrush will be locked to a single Apple ID. The device will be wildly popular because nobody likes it when someone else uses his or her toothbrush. Even John Dvorak will hail Apple's move.

## Your Storage Dream Date Just Got a Whole Lot Cheaper



### The 3ware Sidecar & Your Apple and PC Workstation: The Perfect Match

The 3ware® Sidecar from AMCC is a powerful SATA RAID desktop storage solution designed for creative professionals and enthusiasts who care about their data and just can't risk losing it! Store and protect tons of your photos, songs, videos, illustrations and web pages at speeds up to 4x faster than eSATA and 28x faster than USB. And now, you can save dollars as well as data!

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\* Using four 1TB SATA drives (not included)



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Your iPod is ready.  
Your music is waiting.  
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Evolve™ plays your music where you want it without miles of speaker wire.  
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Inside or out. Crank it in the kitchen. Party on the patio. Anywhere within 150 feet.  
Evolve is the no-wires freedom your music has been waiting for.

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Evolve is a trademark of Griffin Technology Inc. iPod is a trademark of Apple Inc., registered in the U.S. and other countries.





## VIDEO

# Apple Releases Final Cut Express 4

Update adds AVCHD support, lowers price

**E**ighteen months after the release of Final Cut Express 3.5, Apple has updated its prosumer video-editing application to version 4, adding several high-end features and cutting the product's price significantly.

One of those high-end features is the Open Format Timeline, which lets

users mix and match DV, HDV, and (on Intel-based Macs) AVCHD material in real time. The feature automatically performs the necessary scaling, cropping, and

frame-rate adjustments, and supports both 1080i and 720p HD resolutions. And when beginning a new project, Final Cut Express 4 automatically configures everything based on the for-

mat of the first clip dropped on the Timeline. Apple also suggests that you can use Final Cut Express 4 to add polish to iMovie '08 projects, which it can import—a good feature for those

users who may lament iMovie '08's departure from its all-in-one video-editing roots.

Besides including more than 50 new FxPlug filters—such as Soft Focus, Vignette, and Light Rays—Final Cut Express 4 also features enhanced audio controls, allowing you to automatically raise any clip to its maximum level without distortion using the new Soft Normalize and Gain controls. At the same time, Apple has dropped Soundtrack, the company's audio-editing and postproduction tool. Apple's senior director of applications product marketing, Kirk Paulsen, explains the absence by saying that GarageBand can now handle almost every audio-editing task.

Final Cut Express still includes LiveType 2, which lets you create animated titles and which comes with a library of animated fonts, textures, templates, and effects. Final Cut Express 4 costs \$199 (instead of \$299, as for previous versions); owners of any previous version can upgrade to version 4 for \$99.

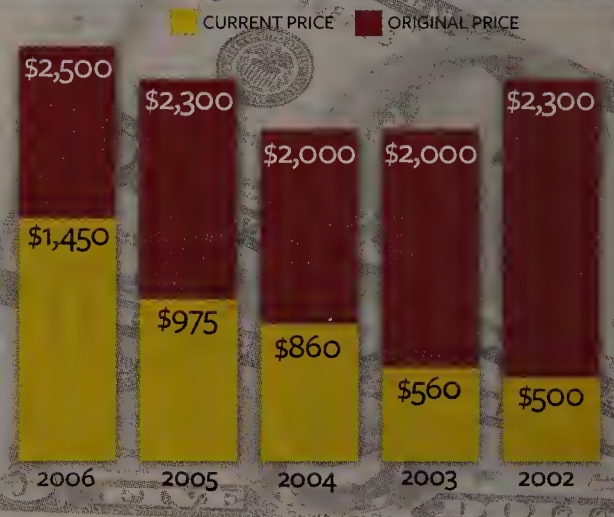
Final Cut Pro 6, available only as part of the \$1,299 Final Cut Studio 2, differentiates itself by its ability to work with uncompressed video, multiple camera angles, 24 channels of audio, and more.—JIM DALRYMPLE

## TECH TRENDS

### Holding Their Value

It's nice to know that when you spend a few thousand dollars on a new Mac, you might get some of that money back when it's time to upgrade. An analysis by James R. Stoup of Apple Matters ([www.applematters.com](http://www.applematters.com)) shows that even after five years, you can resell Mac laptops on eBay for an overall average of \$500.—MARYANN JONES THOMPSON

BASED ON EBAY PRICE OF 15-INCH MACBOOK PRO (2006), 15-INCH POWERBOOK (PRIOR YEARS).



## PRODUCT WATCH

### SOFTWARE

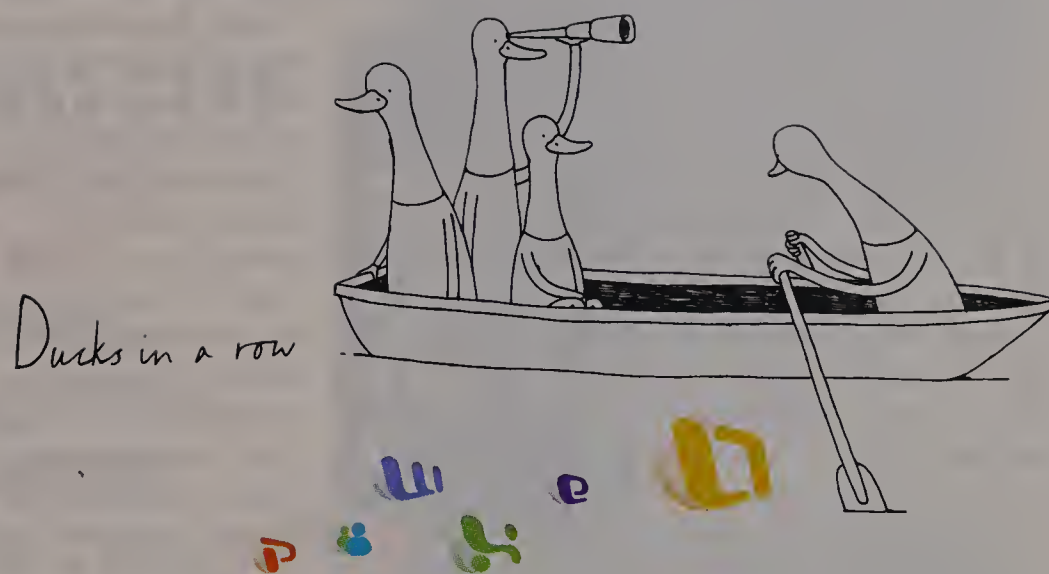
**Contactizer 3.5**, from Objective Decision ([www.objective-decision.com](http://www.objective-decision.com)): Contact-management software adds a Data Picker panel and the ability to manage projects directly from the task manager (Express, \$60; Pro, \$120).

**Disclabel 5**, from SmileOnMyMac ([www.smileonmymac.com](http://www.smileonmymac.com)): Updated software for designing CD and DVD labels adds a special clip-art browser, more templates, and simplified image support (\$36; upgrade, \$15).

**Knoll Light Factory 3**, from Digital Anarchy ([www.digitalanarchy.com](http://www.digitalanarchy.com)): Photoshop plug-in for designing photo-realistic lighting effects offers more than 50 new light presets, a redesigned user interface, and real-time preview support (\$149; upgrade, \$89).

**Little Snitch 2**, from Objective Development ([www.obdev.com](http://www.obdev.com)): Privacy utility adds Leopard support as well as an interface that lists all defined rules and includes a new network monitor (\$25; upgrade, \$13).





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## PHONES

## iPhone Update

Unlocked models in Europe, and 3G on the way

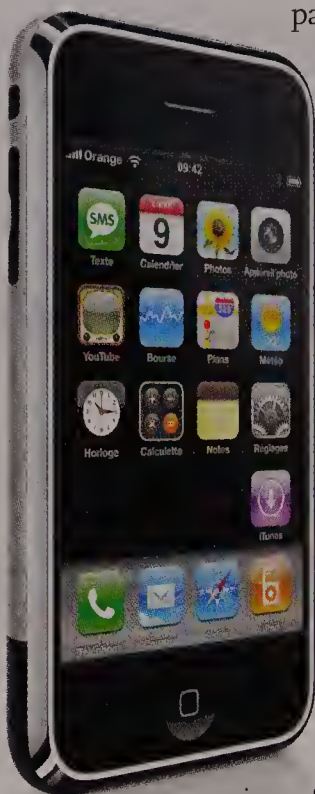
**T**he iPhone has made headlines for its innovative design and functionality, but also because of some options that it's missing. Here's what's going on in the world of iPhones.

> Apple has struck exclusive deals with mobile-phone carriers in the countries where the iPhone is now available. But under French law, operators must make it possible for users to unlock their phones from operators' networks so they can use those phones with the carriers of their choice. When Orange began selling the iPhone in France on November 29, it offered a €649 model without a contract alongside its €399 standard model. For €100, Orange will unlock its iPhones, or users can wait six months from the date of purchase for free unlocking.

> After rival Vodafone filed a lawsuit alleging that T-Mobile's sale of locked phones tied to a two-year contract

breached German consumer protection laws, T-Mobile agreed to sell an unlocked version of the iPhone for €999 (compared to €399 for the regular version). But as soon as a court in Hamburg ruled that the company need not sell an unlocked phone, T-Mobile stopped offering such an option. That leaves France as the only country where users can get unlocked iPhones without being forced to hack them.

> It's not often that someone trumps Steve Jobs with news on upcoming Apple products, but AT&T chief executive officer Randall Stephenson did so by saying that Apple would announce a 3G version of the iPhone in 2008. 3G is the third generation of mobile-phone standards and technology, and allows for much faster wireless data speeds than EDGE without having to connect to a Wi-Fi hot spot.



## CREATIVE NOTES



Looking for a better way to make photo galleries for the Web? Dominey Design ([domineydesign.com](http://domineydesign.com)) has released SlideShowPro for Lightroom, a \$25 plug-in that lets you create highly customized, Flash-based Web galleries from your Adobe Photoshop Lightroom photo collections.

The plug-in works within Lightroom's Web module and offers more than 60 options for building interactive slide shows. You can adjust almost every aspect of your galleries, including image placement and size; the colors of buttons, backgrounds, and other elements; and the inclusion of metadata in captions and overlays. Since it's all embedded within Lightroom, you can save your settings as a template, and use Lightroom's FTP capabilities to update galleries quickly. There's even a full-screen mode for viewing slide shows, and, if you don't mind getting your hands dirty (by mucking with some XML code), you can showcase multiple albums and add audio tracks to galleries.

This is the third version of Dominey's Flash-based tool, joining a \$29 version for building galleries from within Adobe Flash, as well as SlideShowPro Director, a host-based content-management application for creating and managing albums and galleries, priced at \$29 per domain. I've been using both apps for a year or so, and I really like them. (If you already own SlideShowPro for Flash, you can purchase the Lightroom plug-in for only \$10.)—RICK LEPAGE

## DIALOG BOX

**"iTunes is a train wreck of an application that actually manages to**

**make Windows Media Player seem at least adequate."**

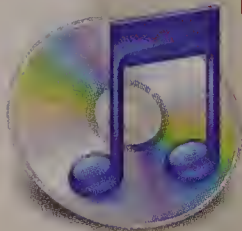
ZDNet blogger  
Adrian Kingsley-  
Hughes

**"We still think we can maintain the operator-centric model because we have the customers, the end users."**

China Mobile's CEO Wang Jianzhou,  
on selling the iPhone in China

**"Apple's iPhone is the best thing invented this year."**

Time magazine's Lev Grossman



## PRODUCT WATCH

## SOFTWARE

**Parallels Desktop Premium Edition**, from Parallels ([www.parallels.com](http://www.parallels.com)): Bundled version of virtualization software includes three Windows programs for Internet security, backup, and virtual-disk-drive manipulation (\$100).

**Photoshop Lightroom 1.3**, from Adobe ([www.adobe.com](http://www.adobe.com)): Updated digital-imaging workflow program adds support for OS X 10.5, plus Raw image support for a number of recent cameras (\$299; upgrade, free).

**PowerBoost 1.0.2**, from Ecamm Network ([www.ecamm.com](http://www.ecamm.com)): iChat AV add-on lets Mac users establish multi-party conferences on Macs that ordinarily don't support that capability (\$8).

**Yojimbo 1.5**, from Bare Bones Software ([www.barebones.com](http://www.barebones.com)): Updated information organizer adds support for image files, along with improved performance for both searching and filtering (\$39; upgrade, free).



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## PEOPLE

# High Honor for Steve Jobs

Apple CEO enters California Hall of Fame

**O**n December 5, 2007, Apple CEO Steve Jobs was inducted into the California Hall of Fame, conceived by California First Lady Maria Shriver and established in 2006 to "honor legendary people who embody California's innovative spirit." Also inducted during the ceremony, held at the California Museum for History, Women and the Arts in Sacramento, were Ansel Adams, Milton Berle, Willie Mays, Robert Mondavi, Rita Moreno, Jackie Robinson, Jonas Salk, John Steinbeck, Elizabeth Taylor, Earl Warren, John Wayne, and Tiger Woods. Jobs accepted his medal from Governor Arnold Schwarzenegger and Shriver, who said, "California is where all of these incredible individuals got a glimpse of their own daring." —JONATHAN SEFF



PHOTOGRAPH BY GETTY IMAGES/JOHN MEDINA

## The Missing Sync for iPhone

Get more out of your iPhone, and more into your iPhone — *fast*, so you can do something else more fun.

Sync iPhone notes, call log, and SMS messages to your Mac.  
Transfer contacts, calendar and photos from your old smartphone to the iPhone.



### Migrate to the iPhone

Move contacts, calendar, photos and more from your old Palm OS, Windows Mobile or BlackBerry smartphone to the iPhone. Once migration is complete we'll guide you to safely clear data from your old phone, making it ready to responsibly pass on.

#### Do U SMS?



The iPhone has a storage limit of just 1,000 text messages. Keep every SMS message by syncing them to your Mac where you can search and view them.

#### Call Log



Transfer the log of your incoming, outgoing and missed calls to your Mac. You can search or export for time-tracking and expense recordkeeping.

#### Note this!



Sync notes from the iPhone to your Mac where you can do more with them in Bare Bone's Yojimbo, Microsoft Entourage, or Mark/Space Notebook.

### Also Available

#### The Missing Sync for Windows Mobile

- Windows Mobile 6 Support
- Video, Call Log, SMS History
- SyncMinder



#### The Missing Sync for BlackBerry

- Sync Contacts & Calendar
- Create, Sort & Search Notes
- Photos & Music To Go



#### The Missing Sync for Palm OS

- HotSync Replacement
- Contact & Calendar Sync
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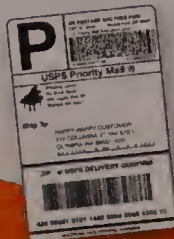
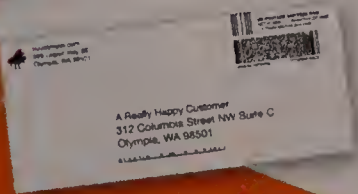
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# Hot Stuff

What we're raving about this month



## Bento

FileMaker's new Bento is a simple, easy-to-use personal database program intended for the user who doesn't need the full power of a professional-level database, but just wants to keep track of information for a small business, hobby, or household. If FileMaker Pro is a seven-course meal, Bento is, well, a box lunch. Bento includes templates for the most common types of databases—inventories, customers, classes, and so on—but building your own database via the drag-and-drop interface is a snap. The program even integrates with OS X's Address Book and iCal, letting you pull information from those sources to insert into other databases. And at \$49, Bento is a heck of a lot cheaper than FileMaker Pro (which costs \$299 for the regular version and \$499 for Advanced). The final release will ship soon, but a free time-limited public preview is available ([www.filemaker.com](http://www.filemaker.com)).—**DAN MOREN**

## PC Card Adapters

When the MacBook Pro debuted, one of its most controversial changes was the elimination of the PC Card slot in favor of the newer ExpressCard standard. If you've still got useful (and expensive) PC Card peripherals—such as Wi-Fi, networking, or data-storage cards—you can bring those add-ons over to a MacBook Pro using Duel Systems' \$119 DuelAdapter ([duel-systemsadapters.com](http://duel-systemsadapters.com)) or Addonics Technologies' \$70 Express-Card CardBus Adapter ([addonics.com](http://addonics.com); shown here). Both support 32-bit Type I and Type II CardBus cards; the DuelAdapter, though bulkier, adds support for 16-bit PCMCIA cards. You can hot-swap cards with both adapters, so you can mix and match your legacy cards on-the-go.—**DAN FRAKES**



## TaskPaper

Managing to-do items is a matter of personal style. If you prefer to use something simple—perhaps a paper and pencil—Hog Bay Software's \$19 TaskPaper is worth a look.

Its text-based interface is a clean white screen onto which you enter your projects and tasks in outline form—no columns or calendars. But TaskPaper's hidden power lies in the way it lets you apply tags to projects and tasks ([www.hogbaysoftware.com](http://www.hogbaysoftware.com)).—**DAN MILLER**



## ATI TV Wonder 650 Combo

AMD's new ATI TV Wonder 650 Combo gives you another way to watch and record TV on the Mac. The \$150 device plugs into a USB 2.0 port and comes in white, neatly matching MacBooks and older iMacs. As its Combo name suggests, the device features one digital tuner and one analog cable tuner (along with composite-video, RCA audio, and S-Video inputs), so your Mac can receive over-the-air digital stations and unscrambled analog cable channels simultaneously. It uses

ATI's custom software for recording, editing, and program-guide information, and ATI is promising a Mac software update to support Clear QAM, which will let you watch unscrambled digital cable channels, too. Hardware MPEG-2 and 2-D and 3-D combo filters round out the TV Wonder 650 Combo's feature set ([ati.amd.com](http://ati.amd.com)).—**PETER COHEN**



## SoundWorks i765

Desktop speaker systems for the iPod abound, but most of them lack ways to play other media formats if your iPod isn't your *only* source of audiovisual entertainment. Cambridge SoundWorks' \$500 i765 aims to fulfill all your multimedia needs while still fitting on your desk or under your TV. The 12-pound system works with all dockable iPod models. In addition to the requisite iPod dock cradle, you get a CD player that supports MP3 and WMA discs, and a high-quality AM/FM, Radio Data System-capable radio. On the video front, the i765 connects to your TV to play both DVDs and iPod-hosted video. The built-in 2.1-channel speaker system delivers surprisingly powerful sound, and a dual-alarm clock and full-featured wireless remote round out the package ([www.cambridgesoundworks.com](http://www.cambridgesoundworks.com)).—**DAN FRAKES**





# SONY

Sony recommends Windows Vista® Ultimate



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Ultimate



# Reviews



## Great Pictures, Small Packages

Compact photo printers offer full-size benefits **BY BRIAN CHEN**

**T**he digital camera era has given birth to the most prolific community of photographers ever. And along with the increasing number of digital shooters comes a greater demand for photo printers. But how can you make quick prints of your photos to hand out to friends and family at special occasions, such as weddings, graduations, or parties? And what if you aren't too tech savvy and don't wish to deal with complex image-editing programs and glitchy software drivers?

That's where compact photo printers come in handy. Designed for portable convenience, compact photo printers are single-function devices dedicated to printing photos quickly and easily on the spot. Most compact models are smaller and lighter than standard photo printers, and they're primarily built to print 4-by-6-inch snapshots. Though these miniature printers can connect to your Mac, they feature memory-card readers, push-button control panels, and LCD screens, among other tools, to spare you from having to deal with the

software drivers required for printing from your computer.

Since compact photo printers are made for special occasions and purposes, their designs are highly innovative compared with those of standard printers. Some models include a carrying handle for convenient transport, while others feature a touch screen and stylus to make photo printing easier and more fun. Aesthetically, these printers look rather interesting: they can resemble a boom box, a car battery, or even an egg-shaped kiosk.

While the concept of compact photo printers is simple and straight-to-the-point, in reality they vary greatly in terms of features, purpose, and performance. Even if you just plan to print photos at home, the ease of use and flexibility these smaller printers afford may compel you to purchase one anyway.

We compared five compact photo printers—the Canon Pixma mini320, the Canon Selphy CP740, the Epson PictureMate Zoom PM 290, the HP Photosmart A626, and the HP Photosmart A826—for quality, speed, features, interface, and design.

### Image Quality

Print quality is the single most important criterion for deciding on a printer. And from this standpoint, the Epson PictureMate Zoom PM 290 came out on top, earning a Very Good rating from our *Macworld* panel of experts for both color and black-and-white photos. Using a four-in-one ink-jet cartridge—which combines cyan, magenta, yellow, and black (CMYK) inks into one unit—the PictureMate Zoom produced crisp and clear photos, with accurate colors and excellent shadow detail. The Canon Pixma mini320, which earned a Very Good score for color photos, came in a close second for print quality. The mini320's colors and shadow detail were also impressive, but overall its photos looked a little less refined than those printed from the PictureMate Zoom, presumably because the mini320 uses a three-in-one ink-jet cartridge (which doesn't have any black ink). The mini320 also can't print pho-



## HOW WE RATE

OUTSTANDING: VERY GOOD: GOOD: FLAWED: UNACCEPTABLE:

tos in black and white, which dampens our enthusiasm for the device.

Next in line was the Canon Selphy CP740, one of the few dye-sublimation compact photo printers on the market. *Dye sublimation*—*dye sub* for short—is an older printing process that uses heat to transfer images onto printable surfaces such as photo paper (see “What Is Dye Sublimation?”). The CP740, like most dye-sub printers and some ink-jets, mixes cyan, magenta, and yellow (CMY) to simulate black. There are upsides and downsides to the CP740’s print quality. An upside is that dye-sub prints look a bit more realistic: because the printing process doesn’t leave ink dots, photos look more natural, with consistent tone and color. But the downside is that the absence of black ink tends to give prints a dark, flat appearance.

The dye-sub printer’s ink ribbon contains CMYO (as opposed to CMYK); O stands for *overcoating*, a laminate that protects photos from discoloration. I preferred the Epson PictureMate Zoom’s four-color pictures.

The two HP ink-jet printers, the Photosmart A826 and A626, produced photos that were identical in quality and were the least impressive

of the batch. Since both printers use a tricolor ink cartridge, they too suffered from overly dark prints, similar to the CP740’s. But the dark prints from the A826 and A626 looked especially blotted, with strange outlines—a flaw that’s most visible under bright light.

and 5 minutes and 18 seconds to print the five photos. The Canon Pixma mini320 came in third, taking 1 minute and 17 seconds for the first test and 6 minutes and 56 seconds for the second test. The two HP printers were slower than their competitors.

## Compact photo printers are made for special occasions and purposes, so their designs are highly innovative.

Our panel of experts gave the same ratings for both printers: Good for color photos and Fair for black-and-white prints.

### Performance

To test speed, we timed how long it took each printer to print one 4-by-6-inch color photo and five 4-by-6-inch color photos at best-quality settings. True to its name, the Epson PictureMate Zoom turned in the speediest results, taking 42 seconds to print one 4-by-6-inch photo and 3 minutes and 9 seconds to print five 4-by-6-inch photos. The Canon Selphy CP740 was the second-fastest printer, taking 1 minute and 15 seconds to print the single photo

### Interface

Despite their disappointing performance, the HP printers scored well on ease of use. The A826 and A626 both feature a truly impressive and innovative touch-screen interface that you control with a stylus. Although the standard push-button control panels are easy enough to use, the touch-screen interface streamlines the process of printing photos: you just insert a photo storage card, tap on a screen, and then tap on the Print icon. Most users will appreciate the ability to crop their photos using a stylus and a touch screen instead of having to repeatedly mash buttons on a control panel. Other than that, the touch-

## Compact Photo Printers Compared

Product	RATING	PRICE	NUMBER OF INKS	COST PER PRINT <sup>A</sup>	PRINT SIZES (IN INCHES)	MEMORY CARDS	COLOR PRINT QUALITY	BLACK-AND-WHITE PRINT QUALITY
Canon Pixma mini320		\$180	3	30 cents	Credit card (2.13 × 3.39), 4 × 6, 4 × 8, 5 × 7, photo stickers	CompactFlash, Memory Stick, Memory Stick Pro, Microdrive, MultiMediaCard, SDHC, Secure Digital	Very Good	N/A
Canon Selphy CP740		\$100	3 <sup>B</sup>	27 cents	Credit card (2.13 × 3.39), credit-card label sheet (2.13 × 3.39), credit-card minilabel sheet (2.13 × 3.39), postcard (4 × 6), 4 × 8	CompactFlash, Memory Stick, Memory Stick Duo, Memory Stick Pro, Memory Stick Pro Duo, Microdrive, MultiMediaCard, MMCmobile, MMCplus, RS-MMC, SDHC, miniSDHC, Secure Digital, miniSD	Good	N/A
Epson PictureMate Zoom PM 290	<b>OUR PICK</b>	\$200	4	25 cents	4 × 6	CompactFlash Type I and II, Memory Stick, Microdrive, MultiMediaCard, SDHC, Secure Digital, xD-Picture Card (Type M/H)	Very Good	Very Good
Hewlett-Packard Photosmart A626		\$150	3	29 cents	4 × 6, 4 × 6.5, 4 × 8 photo card, 4 × 12 panorama, 5 × 7	CompactFlash Type I and II, Memory Stick, Memory Stick Duo, MultiMediaCard, Secure MultiMediaCard, Secure Digital, xD-Picture Card	Good	Fair
Hewlett-Packard Photosmart A826		\$250	3	29 cents	4 × 6, 4 × 6.5, 4 × 8 photo card, 4 × 12 panorama, 5 × 7	CompactFlash Type I and II, Memory Stick, Memory Stick Duo, MultiMediaCard, Secure MultiMediaCard, Secure Digital, xD-Picture Card	Good	Fair

**HOW WE TESTED:** We printed all test files from a SanDisk CompactFlash card inserted into the printer. A panel of experts examined samples of the printer’s output to rate its print quality as Superior, Very Good, Good, Fair, or Poor in comparison to the output of past compact photo printers we’ve tested. <sup>A</sup>Calculated using the price of the vendor’s photo-paper-and-ink package and dividing it by the vendor’s estimated yield for a single ink cartridge. <sup>B</sup>This printer uses dye-sublimation printing technology. —MACWORLD LAB TESTING BY BRIAN CHEN



screen interface made it so simple to navigate through the printers' menus that I never needed to consult the user manual. HP's interface is a good sign for things to come in the consumer printer market.

The PictureMate Zoom's interface consists of a standard multibutton control panel and a 3.6-inch LCD screen. Though not as fancy as a touch screen, the PictureMate Zoom's interface is straightforward and easily navigable. I had no problems choosing, editing, and cropping images to print photos just the way I wanted them.

The Pixma mini320's interface is slightly more complex than the PictureMate Zoom's. Like Apple's iPod, the mini320 provides a scroll wheel for navigating through your options and media. It also has a few additional buttons for basic functions. Overall, I found this control panel intuitive, but the printer's menu layout and organization were a bit confusing. For instance, after applying some edits to a photo, I saw a Preview option on the menu. But when I pressed its corresponding button, the screen displayed a thumbnail of the image that I couldn't enlarge. The mini320 actually has no option to preview edited photos before printing them, despite the presence of this menu item. It was also difficult to find the printer's special Color Balance mode because it was not under the Special Options menu where I expected to find it. These small interface quirks were misleading and disorienting.

## Macworld Lab Test

4-by-6-inch Print Speed

Photosmart A826	1:29
Photosmart A626	1:38
PictureMate Zoom PM 290	0:42
Pixma mini320	1:17
Selphy CP740	1:15

**HOW WE TESTED:** We recorded the time it took to print one 4-by-6-inch color photo. Shorter times are better.

Canon's Selphy CP740 has the simplest, most minimal interface. One button gives you the option to print dates on your photos, another lets you choose whether to print a border, and a display button gives you a larger preview of your photo. It also has a red-eye-removal button, and, of course, power and print buttons. A Mode button lets you choose whether to print a single photo, multiple copies of a photo, or all the photos on your memory card. To me, the single- and multiple-copy options seem unnecessary, since the plus (+) and minus (-) buttons should allow you to increase or decrease the number of prints without switching modes.

### Image Editing

The image-editing options varied greatly among this batch of compact

photo printers. The unique editing capabilities of the A626 and A826 are perfect for scrapbookers. For example, you can write directly on your photos using the stylus—to, say, sign a photo, compose a message, or doodle an illustration. The stylus and touch screen also make it easy to crop photos, add or remove effects, type captions, add frames, and insert clip art.

The PictureMate Zoom also provides a satisfying selection of image-editing options. With the Zoom, I was able to crop, remove red-eye, apply color effects, and more. In contrast, the two Canon printers—the mini320 and the Selphy CP740—are a bit disappointing. The mini320 has cropping, color-tweaking, and image-optimization features, but doesn't give you the option to preview your image edits—so you could waste a lot of ink on test prints before getting the perfect one. Aside from a red-eye-removal option, the CP740 doesn't provide any image-editing tools.

### Design

The A826's design is unique. With its egg shape, reminiscent of a photo kiosk, the A826 caught the attention of several passersby, who stopped by my cubicle just to look at it. An important note about the A826: though it's a compact photo printer, that doesn't mean it's easily portable. Measuring 14.7 by 15.1 by 10.4 inches with its output and paper trays open and ready to use, the A826 is bigger than the other

#### Photosmart A626



**PROS:** Intuitive, innovative user interface;

convenient mobile design; supports up to 4-by-12-inch panoramas.

**CONS:** Dark prints appear flat and dull due to processed blacks; input tray's strange design limits capacity.

**PRICE:** \$150

**COMPANY:** Hewlett-Packard, [www.hp.com](http://www.hp.com)

**FULL REVIEW:** [macworld.com/3190](http://macworld.com/3190)



#### Photosmart A826



**PROS:** Intuitive and innovative user interface; attractive design.

**CONS:** Dark prints appear flat and dull due to processed blacks; rounded, smooth design makes printer difficult to handle.

**PRICE:** \$250

**COMPANY:** Hewlett-Packard, [www.hp.com](http://www.hp.com)

**FULL REVIEW:** [macworld.com/3187](http://macworld.com/3187)



#### PictureMate Zoom PM 290



**PROS:**

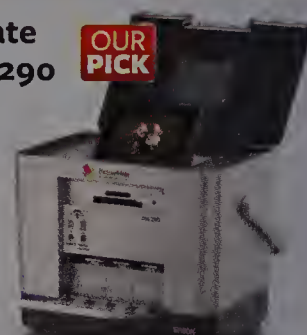
Speedy; prints excellent photos with accurate colors and great shadow detail; user friendly; built-in CD burner.

**CONS:** No prints larger than 4 by 6 inches; boxy, industrial design.

**PRICE:** \$200

**COMPANY:** Epson, [www.epson.com](http://www.epson.com)

**FULL REVIEW:** [macworld.com/3102](http://macworld.com/3102)





# Looking for the answer?



1. d2 Quadro Hard Disk; 2. 526 LCD Monitor; 3. Skworn (Blue); 4. LoCinema Premier; 5. Big Disk Extreme; 6. d2 Blu-ray Drive; 7. Biggs Quadra 8. SAFE Mobile Hard Drive; 9. Portable DVD-RW with LightScribe; Design by Sam Hecht; 10. 321 LCD Monitor; 11. Skworn (Pink); 12. d2 SAFE Hard Drive; 13. Rango Hard Disk; 14. Ethernet Disk RAID; 15. Little Disk; Design by Sam Hecht; 16. Ethernet Disk; 17. Back Hard Drive (Red); 18. Desktop Hard Disk; Design by Neill; 19. FireWire Speakers; 20. Little Big Disk; 21. Little Disk; Design by Sam Hecht; 22. Dupli Disc DVD125; 23. Golden Disk; 24. 2big Tape; 25. USB Key Max; 26. Ethernet Disk mini; Home Edition; 27. USB Key Max (Black); 28. Hub; 29. Brick Hard Drive (Blue); 30. Little Disk; Design by Sam Hecht

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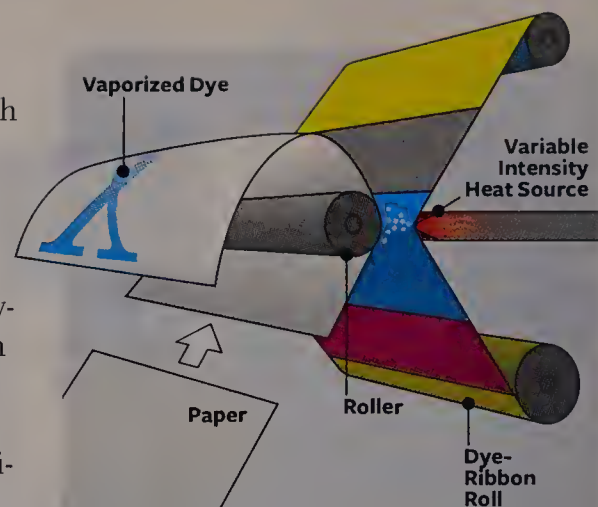
compact photo printers we tested. Its touch screen is also especially large, at 7 inches. The printer lacks a handle, so carrying this device around on trips or to events would be impractical. Rather, it's designed to serve as a personal kiosk or home photo center. Still, the printer could use a feature that would make it easier to grip, in case you wanted to move it from one room to another in your home. The egg shape makes it slippery and difficult to hold.

In terms of interface and features, the A626 is practically the same printer as the A826, but in terms of size and shape, their designs are completely different. Significantly smaller than the A826, the A626 measures approxi-

to load the paper. The A626 could stand some design improvements, such as easier access to its input tray and greater paper capacity.

Similar to the A626, the PictureMate Zoom is designed for mobile use. Equipped with a convenient carrying handle, the Zoom has a boxy form that resembles a car battery. The PictureMate lineup's appearance has changed a lot over the years. The original model (★★★★; [macworld.com/3189](http://macworld.com/3189)) was shaped like a small, rounded boom box. Most *Macworld* editors agree that this new design is not as aesthetically pleasing as that of previous generations.

Sporting a cool silver-and-white case, the Pixma mini320 has a retractable



## What Is Dye Sublimation?

When you think of printers, the words *inkjet* and *laser* usually come to mind. But some printers make use of older, less-common printing technologies. Dye sublimation was originally used in industrial and commercial applications for medical imaging, fabric printing, and so forth. Today, dye sub is also used for photographs and various media. The dye-sub printing process is complex yet intriguing.

Instead of using ink cartridges, a dye-sublimation printer utilizes a ribbon containing CMYO (cyan, magenta, yellow, and overcoating), which differs from the CMYK (cyan, magenta, yellow, and black) system used in most printers. Unlike ink-jet printing, dye-sub printing is a multistep process, in which a small heater inside the printer vaporizes solid dye, and the printer then transfers each of the colors onto the printable surface one at a time. When you're printing a photo, you'll see the printer roll a sheet of photo paper in and out repeatedly until it has transferred each layer of color onto the sheet, creating a picture composed of continuous tones.

With the ink-jet printing process, on the other hand, the printer sprays miniature droplets of liquid ink onto paper. If you inspect your prints closely, you'll see that the printer leaves behind a huge mass of dots that constitute your image. Just how visible these dots are depends on the printer's print resolution (measured in dots per inch, or dpi), among other factors. Many of today's ink-jet printers do an excellent job of producing prints so that the dots are barely, if at all, visible.

## The image-editing options varied greatly among this batch of compact photo printers.

mately 7.7 by 8.7 by 9.9 inches with its output and paper trays open. Equipped with a small carrying handle, the attractive, boom-box-shaped A626 is designed for carrying along on trips or special occasions. The A626 also weighs only 3.4 pounds, so it won't weigh down your luggage when you bring it with you on a trip to Hawaii. The problem I had with the A626 was its input tray. You access the tray by prying open a cover on the back of the printer, but that leaves very little space

carrying handle. When you're using the printer, you can simply push the handle in so it's out of the way. Though this printer does a good job of protecting its control panel with foldable covers, I was surprised that no cover protected the printer's memory-card slots. Their location on the right side of the printer allows dust to enter.

Like its interface, the Selphy CP740's design is by far the simplest in this group. A small, rectangular box with rounded corners, the CP740 was

### Pixma mini320



#### PROS:

Outputs high-quality, attractive prints.

**CONS:** Same problems as its predecessor; faint scratches on prints; no black-and-white option; cost per print has increased since last year; doesn't include preview mode for edited photos.

**PRICE:** \$180

**COMPANY:** Canon, [www.canon.com](http://www.canon.com)

**FULL REVIEW:** [macworld.com/3192](http://macworld.com/3192)



### Selphy CP740



#### PROS:

Dye-sub printing produces continuous tones and colors; includes retractable USB cable.

**CONS:** Paper type for 4-by-6-inch prints limited to Canon postcards; lacks advanced image-editing features; dark prints appear flat; less intuitive operation than comparable printers.

**PRICE:** \$100

**COMPANY:** Canon, [www.canon.com](http://www.canon.com)

**FULL REVIEW:** [macworld.com/3191](http://macworld.com/3191)





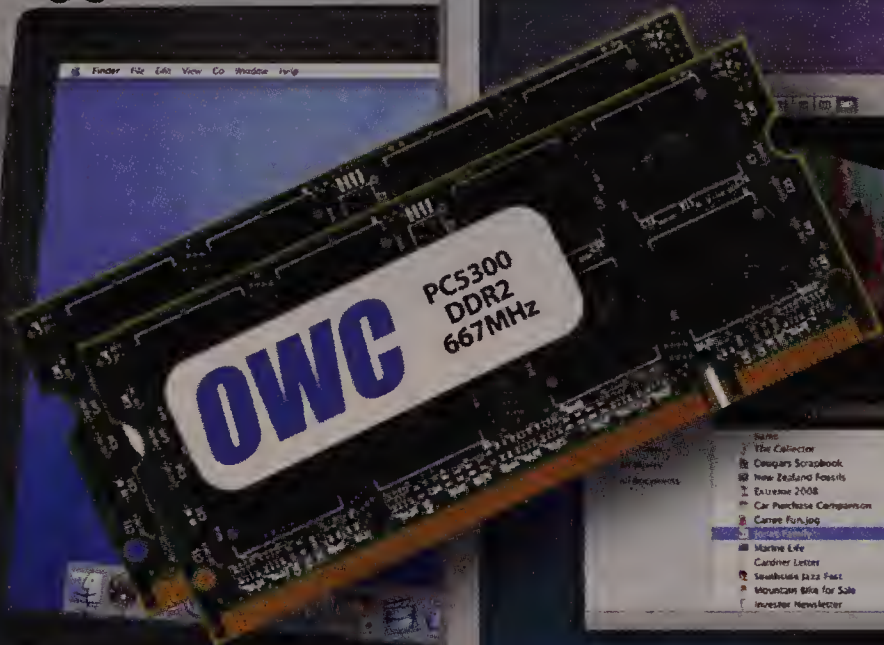
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**Kiosk Style** The HP Photosmart A826 features an eye-catching design and an innovative, intuitive user interface.

the only printer in the group that had no flip-up LCD screen. Rather, the 2-inch display is fixed on top of the printer, surrounded by control buttons. Like the mini320, the CP740 leaves its memory-card slots unprotected. Also, getting used to the input tray's anomalous design could take some time if you're accustomed to ink-jet printers. Instead of simply standing up paper in a vertical tray, you must place the paper in a small, covered tray, open the tray's lid at an angle, and shove the tray into the paper feeder.

### Features

You won't see much variety in terms of extra features for this group of printers. The only one with a notably different capability is the PictureMate Zoom, which includes a built-in CD burner. This feature would come in handy if you ran out of ink or paper or you just wanted a quick way to distribute all your photos to family and friends at an event.

For special occasions when you're nowhere near a power outlet (say, at a

beach party or cookout), the PictureMate Zoom and mini320 both offer optional batteries that you can purchase separately.

### Memory Cards

Most compact photo printers support a wide range of memory cards, freeing you of the need to connect via USB to your Mac. The PictureMate Zoom sup-

**Most compact photo printers support a wide range of memory cards, freeing you of the need to connect via USB to your Mac.**

ports CompactFlash (Types I and II), Memory Stick, Microdrive, Multi-MediaCard (MMC), SDHC, Secure Digital, and xD-Picture Card. The two HP printers support most of that lineup, along with the Memory Stick Duo.

The mini320 and the Selphy CP740 add the Memory Stick Pro to that list—but they omit the xD-Picture Card, which leaves many Fujifilm and Olym-

pus photographers out of luck unless they purchase a separate card adapter.

If the CP740 doesn't support your camera's memory card, you have another option: the printer includes a special retractable USB cable that will connect with PictBridge-compatible digital cameras.

### Paper

Compact photo printers were originally designed to print 4-by-6-inch photos, but today most of them can print other sizes too. Both HP models, for example, can print up to 4-by-12-inch panoramas—which comes in handy for people who enjoy snapping landscapes. The flexibility in print sizes these two printers offer will appeal to the flourishing scrapbook and photo hobbyist communities.

The Pixma mini320 can also print several photo sizes up to 5 by 7 inches. This range isn't as impressive as that of the two HP printers, but the option to print 5-by-7-inch photos is practical.

I mentioned earlier that the PictureMate Zoom was the top performer in quality and speed. Disappointingly, it can print only 4-by-6-inch photos. With compact printers, you'll probably be printing in this size most often, but the limitation is still unfortunate.

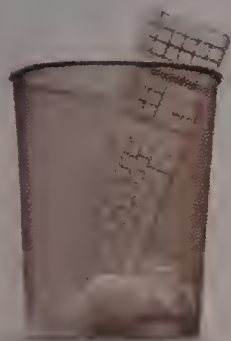
The Selphy CP740 was the most disappointing when it came to paper size—it can print 4 by 6 photos only as *postcards*. Canon offers just one type of paper for the CP740 in this size—and it isn't exactly photo paper, but rather 4-by-6-inch postcard paper, so that the back of every photo you print at that size

includes address lines and a box where you can stick a stamp. Because the CP740 is a dye-sub printer, it requires a special type of paper, so you can't get away with using another vendor's paper or generic photo paper. I found this limitation frustrating, as the CP740 is advertised as a photo printer, not specifically as a postcard printer. And its prints are pleasing enough so that I'd want to print more than just postcards.





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### Print Price

The PictureMate Zoom was the only printer to use the traditional CMYK cartridge found in most modern ink-jet printers. Thus, the PictureMate Zoom produced the photos with the most accurate colors, the best shadow detail, and the deepest, truest blacks. Ironically, the PictureMate Zoom's cost per print is the lowest of the bunch. Epson offers an economical ink-and-paper combination pack containing one cartridge and 150 sheets of 4-by-6-inch glossy photo paper, putting the cost per print at 25 cents.

Compare this to the mini320. For \$30, Canon offers a similar combination pack containing 100 sheets of glossy photo paper and an ink cartridge, making the cost per print 30 cents. Last year, Canon offered the same combination pack for the mini260 model (★★★★; [macworld.com/1694](http://macworld.com/1694)) for \$28, which means that the cost per print has gone up 2 cents. That may seem insignificant, but at 30 cents per print, the mini320 is the most expensive to use of all the compact photo printers we reviewed.

HP offers the same ink-and-paper combo for both the A826 and the A626. At \$35 for 120 sheets and one ink cartridge, the price per print calculates to 29 cents for these printers.

The Selphy CP740 has a modest price per print. Canon sells its ink and postcard paper combination pack, yielding 108 prints, for \$30; the price per print comes to 27 cents.

### Macworld's Buying Advice

By far, the Epson PictureMate Zoom stood out as the strongest candidate of the five models. It printed the highest-quality photos at the fastest speeds. It provides a user-friendly control panel and interface, and its convenient carrying handle and battery option make it perfect for mobile use. Best of all, given its quality and top performance, the PictureMate Zoom is the least expensive of the five printers to use. Its only disadvantage is its print-size limitation, which its other fine features heavily outweigh. ✕

**Brian Chen** is Macworld's assistant editor.

## Compact Printer or Online Service?

Purchasing a compact photo printer isn't your only option for immortalizing your memories. If you don't crave instant gratification or you just don't wish to add a printer to your desktop clutter, you can take advantage of online photo-printing services that develop and print your photos and ship them to your home.

We uploaded our test photos to two popular online photo-printing services—Mpix ([www.mpix.com](http://www.mpix.com)) and Snapfish ([www.snapfish.com](http://www.snapfish.com)). The results from both photo services were very impressive. Photos from Snapfish

appeared more tinted and slightly flatter than most of the test prints we produced on our compact photo printers. But overall, the Snapfish photos looked very professional, clear, and smooth; and though they were on the darker side, colors looked pleasing. Snapfish also produced the best black-and-white photos of all the print samples we evaluated. The Snapfish service uses a glossy Fujifilm photo paper, which makes photos look very high quality.

Photos from Mpix were vivid, with accurate colors and excellent shadow detail. Black-and-white photos from Mpix also looked attractive, although they had a slight brown color cast. Mpix printed on Kodak Professional Portra Endura photo paper, and the results were comparable to our test prints from the best compact photo printer in this roundup—the Epson PictureMate Zoom.

Which route you choose—purchasing a compact photo printer or using a photo-printing service—depends on how fast you need your prints. Keep in mind that if you choose to purchase a printer, you'll be paying for the hardware, the paper, and the ink. Per-print prices from photo

services vary. Snapfish, for example, charges 12 cents for each 4-by-6-inch print; Mpix charges 19 cents. And, of course, you'll have to factor in the cost of shipping. The least expensive shipping method for Snapfish costs \$1; Mpix's slowest shipping method costs about \$2.50, and this price increases depending on the number of photos you order.

If you print photos only occasionally, it may be more economical to use online photo-printing services. But if you're a scrapbooker or photo hobbyist, or if you like to tuck a few pictures into the pockets of friends and family as you say good-bye, you'll benefit from the purchase of a compact photo printer. A printer should save you money and time over the course of its life—and give you results comparable to those of a sampling of commercial online photo services.







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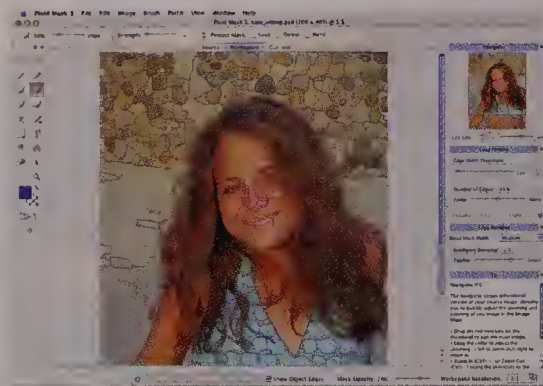


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What we're reviewing online this month



## SOFTWARE

### Fluid Mask 3 ▴

**RATING:** **PRICE:** \$249 **COMPANY:** Vertus

**URL:** [www.vertustech.com](http://www.vertustech.com)

Among the most difficult tasks in Adobe Photoshop is separating complex objects from their backgrounds. It can be time-consuming and frustrating to isolate objects such as hair, tree branches, or animal fur using Photoshop's built-in selection and masking features. Fluid Mask 3.0.2, a Photoshop plug-in, can save you time and effort and help you produce natural-looking cutouts. It offers a variety of useful features for tackling almost any difficult image, from wispy hair to complex foliage. Online video tutorials and live training sessions ease the learning curve ([macworld.com/3243](http://macworld.com/3243)).

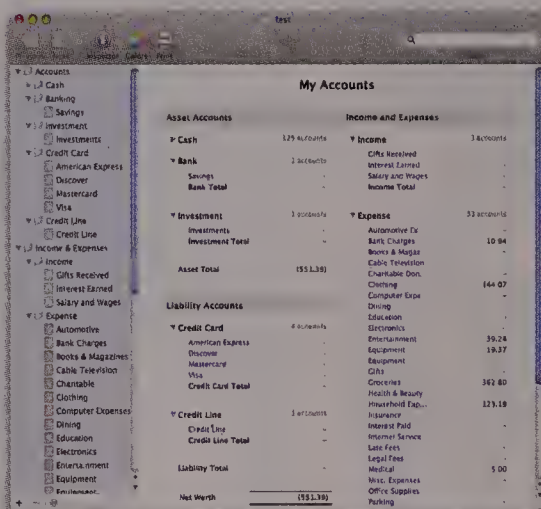
### LifeAgent 2.1

**RATING:** **PRICE:** \$30 **COMPANY:** Memeo

**URL:** [www.memeo.com](http://www.memeo.com)

Like Apple's Backup program, Memeo's LifeAgent 2.1.71 is based on *plans*—sets of backup source items and the destinations where they're stored. You can have as many plans as you want, and LifeAgent backs up different sets of files to different locations simultaneously. Where LifeAgent truly breaks the mold is in its scheduling feature: it doesn't have one. Instead, LifeAgent immediately backs up any file meeting

the criteria you've specified, as soon as you create or save it. LifeAgent performs some tasks brilliantly, but it has significant shortcomings that diminish its overall appeal. The concept of instant and automatic backups is a good one. But the program needs work, especially in the area of file restoration, before it can contend with the likes of Time Machine ([macworld.com/3244](http://macworld.com/3244)).



### Liquid Ledger 2 ▴

**RATING:** **PRICE:** \$60 **COMPANY:** Modeless

**Software URL:** [www.liquidledger.com](http://www.liquidledger.com)

Liquid Ledger 2.0.4 is a good personal finance program with a simple, uncluttered interface that helps you track your income and expenses. It allows you to import transactions downloaded from banking institutions, gives you a good graphical summary of your financial status, and can handle multiple currencies. But the program fails to make data entry as easy or as obvious as it should be, especially when it comes to basic features such as adding categories. It also lacks the kind of detailed reporting tools found in similar programs. If simplicity is important to you, this will be an appealing personal financial application ([macworld.com/3252](http://macworld.com/3252)).

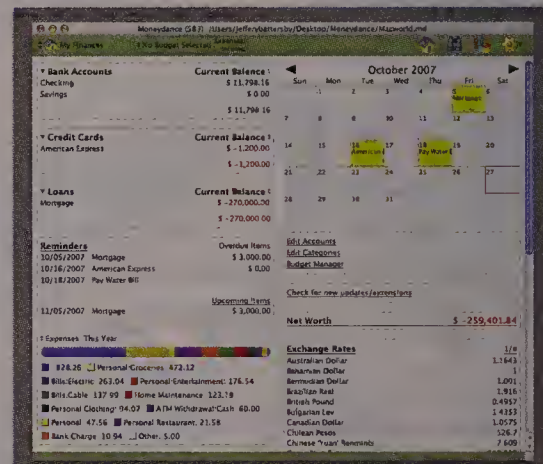
### MediaCentral 2.6 ▹

**RATING:** **PRICE:** \$30 **COMPANY:** Equinux

**URL:** [www.equinux.com](http://www.equinux.com)

As its name implies, MediaCentral 2.6.3 is an application that centralizes the media on your Mac in a streamlined, cohesive menu, allowing you to

turn your computer into an entertainment center. The application does a fine job of organizing and presenting your media, and its Internet-based features are truly impressive. However, MediaCentral's admirable goal—to give you access to all your media in one place—can cause sluggish performance as you add more media to your library. With some improvements to video playback and performance, and some revisions to the user manual, MediaCentral has the potential to become a powerful piece of software ([macworld.com/3245](http://macworld.com/3245)).



### Moneydance 2007 ▴

**RATING:** **PRICE:** \$30 **COMPANY:** Reilly

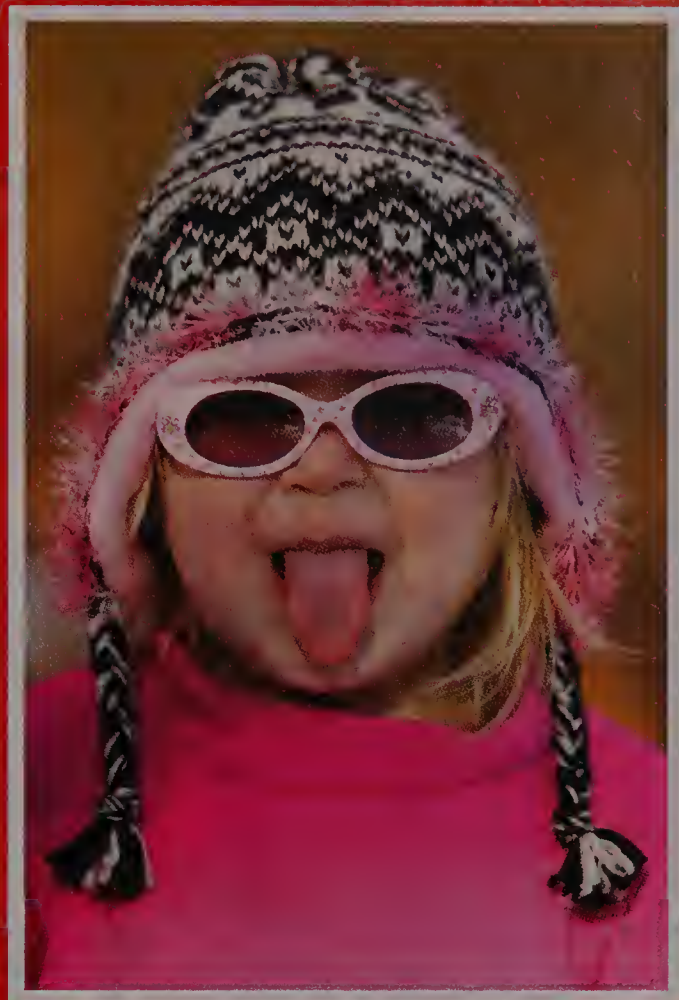
**Technologies URL:** [www.moneydance.com](http://www.moneydance.com)

We've reviewed Moneydance several times, and each new version has made significant improvements to the program. Moneydance 2007 proves to be a very good personal finance program with some features that rival Quicken's. It offers excellent graphing and reporting tools that you can customize and save so they're available from the home page with one click. While the program still has a few minor quirks and lacks some of the data-entry features that

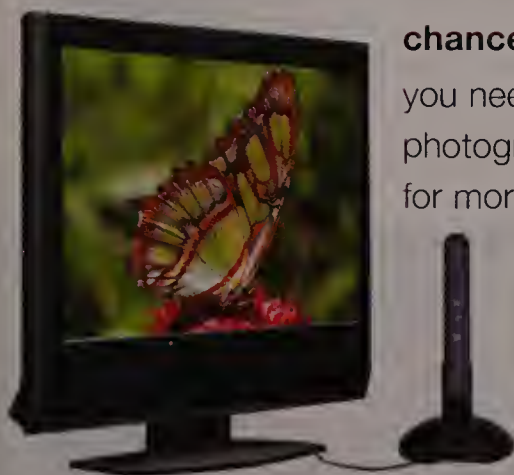
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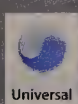
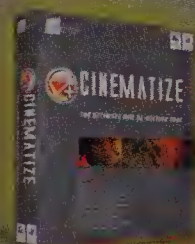
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## REVIEWS

[macworld.com/reviews](http://macworld.com/reviews)

make Quicken a perennial favorite, Moneydance offers nearly everything you need to track and manage your personal finances ([macworld.com/3246](http://macworld.com/3246)).

## Musika for iPod

**RATING:** **PRICE:** \$5 **COMPANY:** Sony **URL:** [macworld.com/3176](http://macworld.com/3176)

The first iPod game from Sony, Musika tests your spelling skills and reaction times. The title of each song you listen to scrolls across the bottom of the screen; across the top, letters, numbers, and symbols appear. The trick is to press Select as soon as you see a letter that is in the song title. You get points for correct answers, with consecutive correct answers multiplying the number of points. Although the game is simple and doesn't offer as much value as other iPod games, it has impressive visuals and a unique take on iPod game play ([macworld.com/3247](http://macworld.com/3247)).

## HARDWARE

### DialogPhone

**RATING:** **PRICE:** £30 (about \$79)  
**COMPANY:** Miglia Technology **URL:** [www.miglia.com](http://www.miglia.com)  
Skype and iChat are fantastic free



tools for voice communication, but unless you invest in a wireless headset or handset, your use of these programs will be confined to your desk. With Miglia's DialogPhone, a wireless phone for your computer, you'll be able to wander away from your Mac as you speak. Placing calls is a snap, though the included phone-book software can't launch multiparty conference calls. You'll need to be at your Mac when you place a call, as you can't use the handset by itself to do so. If you're mainly concerned with not missing an incoming voice-chat request, then the DialogPhone is an ideal solution at an appropriate price. However, if you need to place calls from the handset while you're away from your desk, consider Miglia's more-advanced wireless handset, the Dialog+, which includes a scrollable phone-book display and a full keypad ([macworld.com/3248](http://macworld.com/3248)).

## Stylus Pro 3800

**RATING:** **PRICE:** \$1,295 **COMPANY:** Epson **URL:** [www.epson.com](http://www.epson.com)

At first glance, Epson's \$1,295 Stylus Pro 3800 looks out of place in the photo-printer market. There are a few very good photo printers with similar features in the \$500 to \$1,000 range, and some excellent industrial-strength printers with richer feature sets start-

# MacBook Core 2 Duo

**RATING:** **PRICE:** 2GHz, \$1,099; white 2.2GHz, \$1,299; black 2.2GHz, \$1,499  
**COMPANY:** Apple **URL:** [www.apple.com](http://www.apple.com)

Apple has once again updated its popular consumer laptop. The newest glossy-screened MacBooks look nearly identical to their six-month-old siblings, but a number of significant under-the-hood improvements have added more zip to this generation with no increase in price. The new high-end and midrange models now clock 2.2GHz, which slightly tops the previous generation's 2.16GHz speed. The low-end build is still at 2GHz. The new MacBooks also feature the newest chip architecture, an updated graphics processor, and

increased RAM capacity. If you bought a Mac laptop recently, the latest MacBook upgrade won't cause you to despair at having missed out. However, if you've been awaiting the optimal time to refresh an iBook or even an older PowerBook G4, this might be it. You'll get plenty of value for the dollar, along with a nice improvement in performance ([macworld.com/3224](http://macworld.com/3224)).



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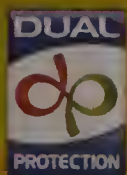


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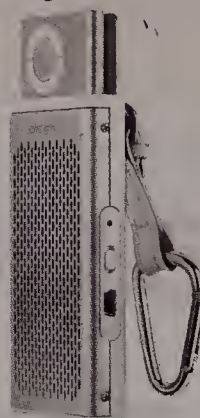


ing at around \$2,000—but there's little in between. If you are a professional photographer or serious amateur looking to reproduce your work at large sizes and with extremely high quality, the Epson Stylus Pro 3800 is a great printer. You get speed, quality, and efficiency at a good price, although you will have to swap out the matte and photo-black inks when changing paper types. While some people will view this flaw as a fatal one, it's hard to argue with the end result: large, beautiful prints on almost any media type ([macworld.com/3249](http://macworld.com/3249)).

## TravelSound i50

**RATING:** **PRICE:** \$60 **COMPANY:** Creative  
**URL:** [www.creative.com](http://www.creative.com)

The TravelSound i50 is one of the few speaker systems that's designed specifically for the second-generation iPod shuffle. Not much bigger than a candy bar, the aluminum-and-plastic i50 features four small speakers and a 15-hour rechargeable battery. Your iPod shuffle attaches securely to the end of the i50 and gets charged while the i50 charges (via the included adapter or a USB cable connected to your computer). Unfortunately, the included plastic iPod cover falls off too easily, but the i50's sound quality is better than you might expect for such small speakers. It's a cleverly designed speaker system and a handy travel companion ([macworld.com/3250](http://macworld.com/3250)).



## Vudu

**RATING:** **PRICE:** \$399 **COMPANY:** Vudu  
**URL:** [www.vudu.com](http://www.vudu.com)

Vudu is a TV set-top box that offers online movie rentals and purchases, allowing you to choose a movie from a vast collection and watch it immediately. It's fun, it's easy to use, and it offers great video and sound quality. Vudu has the potential to become a revolutionary device in the digital-movie era, but you may want to hold off until the studios work out a less complicated fee structure for the movies you can buy and rent with this machine. Waiting will also allow the service to get its new releases up-to-date—and add HD video offerings to the library ([macworld.com/3251](http://macworld.com/3251)).



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## PRINTERS

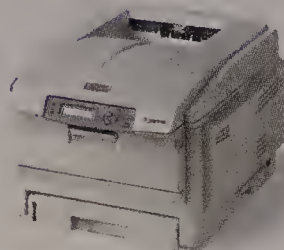
### LASER PRINTER C6100dn

RATING: 

PRICE: \$739

COMPANY: Oki Data

URL: [www.okidata.com](http://www.okidata.com)



The C6100dn, from Oki Data, produces great-looking prints and includes built-in duplexing. It also offers easy network connectivity and quick printing speeds ([macworld.com/1670](http://macworld.com/1670)).

### INK-JET PHOTO PRINTER

#### Stylus Photo 1400

RATING: 

PRICE: \$320

COMPANY: Epson

URL: [www.epson.com](http://www.epson.com)



**NEW** Epson's Stylus Photo 1400 prints photos rich in color and detail. Capable of printing photos as large as 13 by 19 inches, this printer is surprisingly affordable, without compromising quality ([macworld.com/2924](http://macworld.com/2924)).

### COMPACT PHOTO PRINTER

#### PictureMate Zoom PM 290

RATING:  PRICE: \$200

COMPANY: Epson

URL: [www.epson.com](http://www.epson.com)



Affordable, problem-free, and fun to use, the PictureMate Zoom is the best and fastest portable photo printer you can currently buy ([macworld.com/3102](http://macworld.com/3102)).

### MULTIFUNCTION INK-JET

#### Photosmart C7180

RATING: 

PRICE: \$280

COMPANY: Hewlett-Packard

URL: [www.hp.com](http://www.hp.com)



The HP Photosmart C7180's features, connection options, and solid print and

scan quality make it an excellent ink-jet MFP ([macworld.com/2475](http://macworld.com/2475)).

### MULTIFUNCTION LASER

#### AcuLaser CX11NF

RATING:  PRICE: \$499

COMPANY: Epson

URL: [www.epson.com](http://www.epson.com)



This device has it all: it's a color laser printer, a sheet-fed scanner,

a copier with networking capabilities, and a fax machine ([macworld.com/1669](http://macworld.com/1669)).

## FLATBED SCANNER

### Perfection V700 Photo

RATING: 

PRICE: \$453






























COMPANY: Epson

URL: [www.epson.com](http://www.epson.com)



The Epson Perfection V700 Photo is an excellent midrange scanner for people who need to scan both reflective media and transparencies, espe-

## MACS

PRODUCT	PROCESSOR	RATING	PRICE <sup>A</sup>	DISPLAY	SPEEDMARK 5 SCORE <sup>B</sup>	FIND CODE <sup>C</sup>
<b>DESKTOP</b>						
<b>iMac</b> 	Intel Core 2 Duo/2GHz		\$1,190	20 inches	 210	3029
	Intel Core 2 Duo/2.4GHz		\$1,490	20 inches	 245	3028
	Intel Core 2 Duo/2.4GHz		\$1,780	24 inches	 245	3027
<b>Mac mini</b> 	Intel Core 2 Duo/1.83GHz		\$580	not included	 159	3030
	Intel Core 2 Duo/2GHz		\$794	not included	 172	3031
<b>Mac Pro</b> 	Intel Xeon/ two dual-core 2.66GHz		\$2,283	not included	 260	2489
<b>PORTABLE</b>						
<b>MacBook</b> 	Intel Core 2 Duo/2GHz		\$1,085	13 inches	 172	3214
	Intel Core 2 Duo/2.2GHz		\$1,230	13 inches	 185	3215
	Intel Core 2 Duo/2.2GHz (black)		\$1,450	13 inches	 186	3216
<b>MacBook Pro</b> 	Intel Core 2 Duo/2.2GHz		\$1,840	15 inches	 185	2932
	Intel Core 2 Duo/2.4GHz		\$2,296	15 inches	 199	2933
	Intel Core 2 Duo/2.4GHz		\$2,370	17 inches	 204	2934

<sup>A</sup>From a PriceGrabber survey of retailers as of December 7, 2007. <sup>B</sup>Speedmark 5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.5 (Leopard). For information on Speedmark testing, go to [www.macworld.com/speedmark](http://www.macworld.com/speedmark). <sup>C</sup>Typing in find codes after [macworld.com/](http://macworld.com/) directs you to a product's review or overview. For example, [macworld.com/2489](http://macworld.com/2489) contains an overview of the 2.66GHz Mac Pro.

Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we'll update this list. For longer reviews of these products and for other product recommendations, go to [macworld.com/reviews](http://macworld.com/reviews). All prices are the best current prices taken from a PriceGrabber survey of retailers as of December 7, 2007.



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cially at high resolutions (macworld.com/1519).

## DIGITAL CAMERAS

### DIGITAL SLR D40

**RATING:**   
**PRICE:** \$475  
**COMPANY:** Nikon  
**URL:** www.nikonusa.com



The Nikon D40 is a great value. This 6.1-megapixel camera comes with every feature you'd desire in a DSLR, such as adjustable ISO, Raw mode, and a variety of image-processing features (macworld.com/2498).

### COMPACT DIGITAL CAMERA NV11

**RATING:**   
**PRICE:** \$263  
**COMPANY:** Samsung  
**URL:** www.samsung.com



An excellent all-around camera, the Samsung NV11 is equally accommodating of beginners and advanced shutterbugs (macworld.com/2984).

## MINIDV CAMCORDER

### PV-GS320

**RATING:**   
**PRICE:** \$372  
**COMPANY:** Panasonic  
**URL:** www.panasonic.com



Compared with other 3-CCD MiniDV camcorders, the Panasonic PV-GS320 is a bargain. And it's a good choice for people who want a camcorder that shoots high-quality video and still images for half the cost of a high definition device (macworld.com/2701).

## LCD MONITORS

### LARGE DISPLAY LP2465

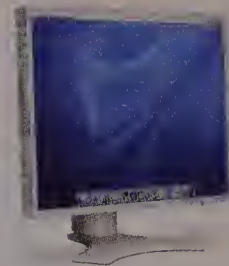
**RATING:**   
**PRICE:** \$610  
**COMPANY:** Hewlett-Packard  
**URL:** www.hp.com



The LP2465 is an affordable and flexible 24-inch desktop LCD with a 16:10 wide-screen aspect ratio that immediately calls to mind the cinema (macworld.com/2508).

### MEDIUM DISPLAY MultiSync 2190UXi

**RATING:**   
**PRICE:** \$977  
**COMPANY:** NEC  
**URL:** www.necdisplay.com

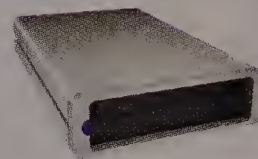


The 21-inch NEC MultiSync 2190UXi does not come cheap, but it offers vivid and accurate colors, as well as a wide viewing angle (macworld.com/1445).

## DUAL-LAYER DVD BURNER

### d2 DVD+/-RW with LightScribe

**RATING:**   
**PRICE:** \$175  
**COMPANY:** LaCie  
**URL:** www.lacie.com



Speedy and versatile, the LaCie d2 external rewritable drive has the added bonus of being able to burn LightScribe images—a cool disc-labeling technology (macworld.com/2263).

## FIREWIRE HARD DRIVES

### DESKTOP DRIVE G-Drive Q 500GB

**RATING:**   
**PRICE:** \$245  
**COMPANY:** G-Technology  
**URL:** www.g-technology.com



The G-Drive Q SATA hard drive has nearly every type of connection you could want. It operates without a fan, so it's very quiet—you hear only the occasional spin of the drive (macworld.com/1622).






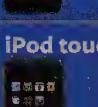







### PORTABLE DRIVE Rocbit 2B

**RATING:**   
**PRICE:** \$222  
**COMPANY:** Rocsecure  
**URL:** www.rocsecure.com



The Rocbit 2B is a fast and pleasantly quiet portable hard drive featuring real-time encryption. It's well worth its cost if security is a concern (macworld.com/1443).

# iPODS

PRODUCT	CAPACITY	RATING	PRICE <sup>A</sup>	DISPLAY	BATTERY LIFE	MEDIA SUPPORTED	FIND CODE <sup>B</sup>
 iPod classic	80GB		\$228	2.5-inch color	30 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3090
 iPod classic	160GB		\$335	2.5-inch color	40 hours of music playback; 7 hours of video playback	Music, photos, album art, video, games	3091
 iPod touch	8GB		\$284	3.5-inch color	22 hours of music playback; 5 hours of video playback	Music, photos, album art, video	3092
 iPod touch	16GB		\$380	3.5-inch color	22 hours of music playback; 5 hours of video playback	Music, photos, album art, video	3093
 iPod nano	4GB		\$144	2-inch color	24 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3094
 iPod nano	8GB		\$189	2-inch color	24 hours of music playback; 5 hours of video playback	Music, photos, album art, video, games	3095
 iPod shuffle	1GB		\$79	none	12 hours of music playback	Music	2238

<sup>A</sup>From a PriceGrabber survey of retailers as of December 7, 2007. <sup>B</sup>Typing in find codes after macworld.com/directs you to a product's review or overview. For example, macworld.com/3092 contains an overview of the 8GB iPod touch.



A man in a dark suit, white shirt, and red tie stands against a red background. He is holding a small, silver, rectangular Maxtor OneTouch Mini Edition drive in his left hand. In the top right corner, a portion of a disco ball is visible.

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# Mac Gems

Get more and expanded reviews at [macworld.com/macgems](http://macworld.com/macgems) **BY DAN FRAKES**



**Extra Dock Space** Overflow extends the Dock's capabilities, and can even replace many of its functions.

## DESKTOP

# Overflow 2.5.3

**RATING:** **PRICE:** \$15 **COMPANY:** Stunt Software **URL:** [macworld.com/3210](http://macworld.com/3210)

Mac OS X offers several ways to access programs, files, and folders, but many third-party programs also offer alternative methods: for example, Overflow. So named because it's designed to hold all the stuff that you don't want cluttering up your Dock, Overflow 2.5.3 works much the way the Dock does. You can drag programs, folders, and documents into the Overflow window and then access those items with a single click. Once you've added a program or folder to Overflow, you can drag items onto the appropriate icons in Overflow to open them or to place them in folders.

The Overflow window lets you create categories—different screens—for holding related items. You can resize the window, move items around, remove items, and even drag an item to a different category. You can navigate Overflow's categories and items using your mouse or keyboard.

As with Exposé, you can use Overflow while dragging a file. For example, you can drag a Word document from an e-mail message, activate Overflow using its hot key, switch to the category containing Word (by dragging the file over the category name or by using the keyboard), and then drop the document onto the Word icon. Or, if you drag an item onto the Overflow icon in the Dock, the Overflow window will pop up; you don't have to click or press anything—just drop your item onto an icon or folder in the Overflow space. This makes Overflow feel like a true extension of the Dock itself.

## AUDIO

# Audiobook Builder 1.0.7

**RATING:** **PRICE:** \$10 **COMPANY:** Splasm **URL:** [macworld.com/3211](http://macworld.com/3211)

Books on Tape may be a relic of an earlier decade, but CD-based audiobooks are

still quite popular. The ubiquity of the iPod has led many people to wonder how to put these CD audiobooks onto their iPods while getting all the features of *real* iPod audiobooks—the ones that show up in the Audiobooks list in iTunes and on the iPod, let you navigate between chapters, and include digital bookmarks.

If you're an avid audiobook listener, perhaps the easiest—and fastest—solution is Audiobook Builder 1.0.7. This handy utility automates the process from beginning to end. It also lets you create audiobooks out of audio files you already have on your hard drive—for example, tracks you previously ripped from a CD.

The actual process of converting an audiobook involves three steps: providing information about the book, importing and organizing the audio files (you can choose the audio format), and building the book. First, on the Cover screen, you input the book's title and author, and, if desired, you provide an image of the cover.

The Chapters screen is where you tell Audiobook Builder the location of the book's audio. For a CD, you simply insert the CD in your Mac's optical drive and then click on Import CD. (Audiobook Builder can automatically grab CD and track information from iTunes.) Choosing Import As Individual Files makes each track a chapter. If an audiobook spans several CDs, place the next disc in your Mac and then click on Import CD again. After importing, you can edit track and disc names and artwork.

I expected the program to import each CD track as a separate chapter; however, it displays the entire CD as a single chapter, with the tracks listed as chapter sections. To fix this, select the CD in the list and then click on the Split button.

You can also import audio files from your hard drive (for example, audiobook chapters you've downloaded from a Web site) or files you've previously added to iTunes.



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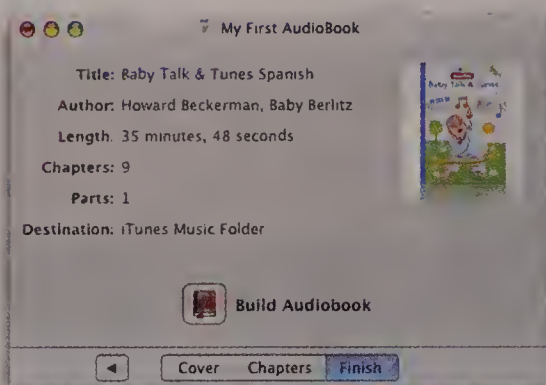
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**Transfer Audiobooks to iTunes** Audiobook Builder enables you to create audiobook files quickly and easily.

The Finish screen provides a preview of the audiobook you're about to create. Assuming everything is correct, you just click on Build Audiobook; Audiobook Builder adds the resulting file to a new Audiobook Builder playlist in iTunes and places the file in the iTunes Music Folder.

Audiobook Builder is also useful for converting children's CDs to chaptered audio files so those CDs don't clutter your iPod with dozens of short tracks; instead, you get a single track for each CD, and iTunes and your iPod will remember where you left off each time you resume playing.

#### BACKUP

## Carbon Copy Cloner 3.0.1

**RATING:** **PRICE:** payment requested

**COMPANY:** Bombich Software **URL:** [macworld.com/0905](http://macworld.com/0905)

Cloning your hard drive—making an exact, bootable copy of your system on another drive—is a useful approach to backing up. If anything ever happens to the original drive, you can reboot using the cloned drive and be up and running in minutes. (Time Machine, which keeps copies of several versions of your files, makes it easy to restore individual items, but if disaster ever strikes, you can't recover quickly using Time Machine.)

Although I'm a big fan of SuperDuper (; [macworld.com/2325](http://macworld.com/2325)), another high-quality cloning utility, Mike Bombich's Carbon Copy Cloner 3.0.1 has recently seen a major update that makes it a viable alternative.

Like SuperDuper, Carbon Copy Cloner—CCC for short—lets you easily create a clone. You just choose a source disk (the original volume) and a target disk (the backup volume, which can be a hard drive or a disk image on a hard drive), choose Copy Everything From Source To Target from the Cloning Options pop-up menu, and, optionally, enable the Erase The Target Volume option. Click on Clone, and CCC will make an exact copy of the source disk on the target disk. The process isn't fast, but it's thorough.

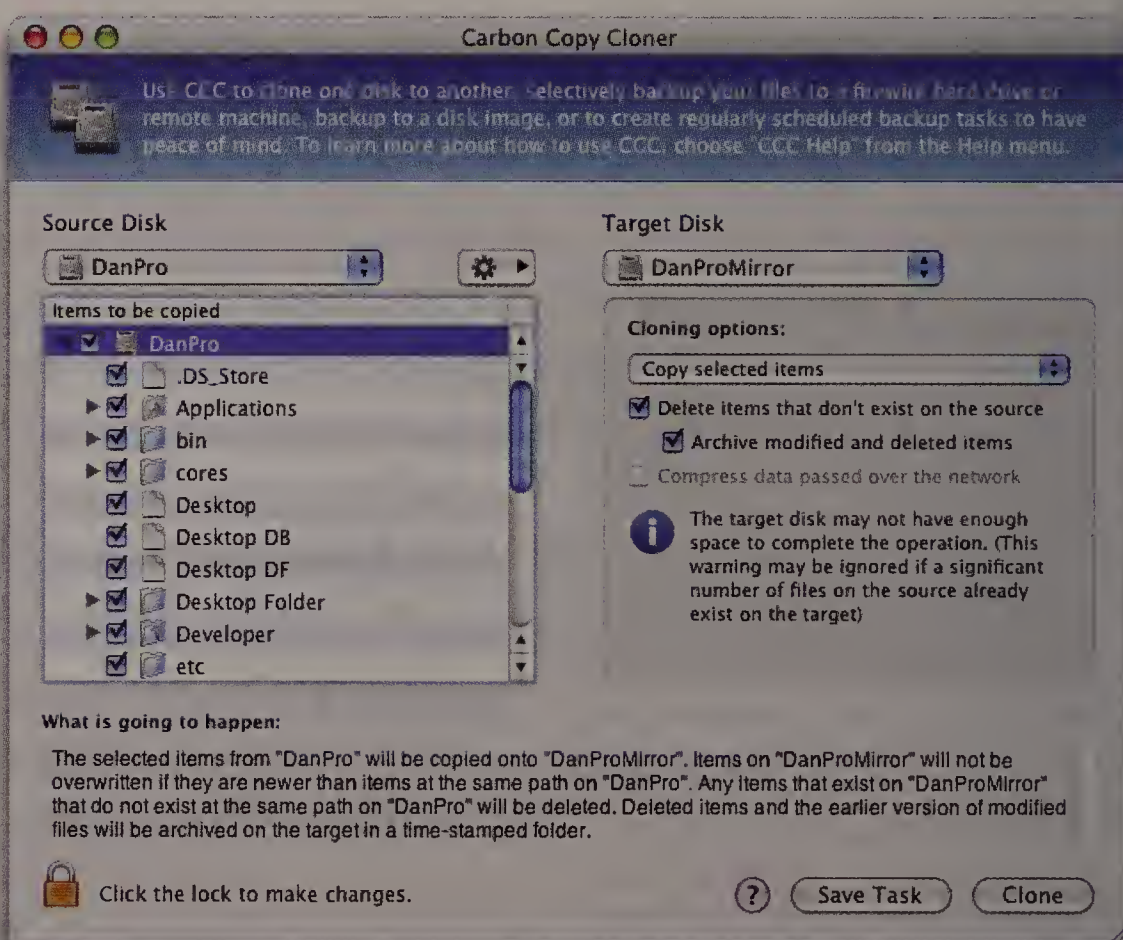
This version of CCC makes it easier than its predecessors did to perform an incremental clone—to update an existing clone backup so it reflects recent changes to your Mac's hard drive, without having to copy the entire drive over again. However, the feature can be hard to locate. To get to it, choose Copy Selected Items from the Cloning Options pop-up menu; this option copies to the target disk only files that have changed on the source disk; it doesn't touch other files on the target—including any that have been deleted from the source. (Keep an eye on your target disk over time to make sure it doesn't fill up with those deleted items.) Selecting the Delete Items That Don't Exist On The Source option will

force the clone to always reflect your hard drive exactly, so that items deleted from the source will also be deleted from the backup. (An Archive Modified And Deleted Items option keeps the deleted-from-source items in a special folder on the backup drive.)

Advanced users will appreciate the capability to clone only particular files, to apply filters to restrict what gets copied, and to copy the selected files to a particular folder within the target volume. CCC now also includes improved scheduling features that make it easy to perform a particular cloning task on an hourly, daily, weekly, or monthly basis. You can even set a backup to occur whenever you reconnect the target volume—an especially useful option for backing up to an external drive.

SuperDuper still has an easier-to-use interface and several useful cloning and advanced options. But for those who want to clone particular folders, Carbon Copy Cloner is an appealing alternative.

**Dan Frakes** is a senior editor at *Macworld* and the senior reviews editor at *Playlistmag.com*. Send your thoughts on this column, or on things you'd like to see in future columns, to [macgems@macworld.com](mailto:macgems@macworld.com).



**Clone Your Drive** Carbon Copy Cloner can make a bootable, mirror-image copy of your hard drive.



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**THE** From Macs to iPods to games, we honor  
our favorite Apple-related products of 2007

# **BEST OF THE BEST**

Hundreds of products come down the pike every year. And we take a look at all of them, keeping an eye peeled for the ones that push the limits and offer innovation, value, and quality. Maybe it's a groundbreaking new Apple release. Or it's that piece of Mac software that handles a task more easily than anyone ever thought possible. Sometimes it's an iPod accessory that helps us enjoy music like never before; other times it's a game that helps us blow off steam.

Whatever the product, we feel that the best of the best deserve some sort of award. And so, in the pages that follow, we hand out three types—the prestigious Editors' Choice Awards, which we give to our favorite Mac products of the year; Plays of the Year, which round up the best iPod accessories; and the Game Hall of Fame, which immortalizes games and gadgets that brightened our leisure time. And the winners are . . .

Editors' Choice  
Awards

**PAGE 74**

Plays of  
the Year

**PAGE 88**

The Game  
Hall of Fame

**PAGE 94**

Illustration by Joshua Gorchov









We honor 32 great Mac hardware, software, and Web offerings that caught our eye in 2007

## THE 23RD ANNUAL

# EDITORS' CHOICE AWARDS

BY MACWORLD STAFF

ILLUSTRATION BY JOSHUA GORCHOV

Every year brings a parade of products into the *Macworld* offices—hardware and software, flagship products and obscure gems, programs produced by giant companies and software coded by one person working out of an apartment. And there are usually one or two surprises from Apple as well.

A handful of products always stand out from the crowd by meeting our high standards for quality, innovation, or value—and in some cases, all three.

Because of that, they win some well-deserved time in the spotlight as winners of our annual Editors' Choice Awards.

Some familiar faces make up our 23rd annual collection of Eddy winners, which recognize our favorite products to hit the market between November 1, 2006, and November 1, 2007. You'll also find a few products that you might not have heard of before this year but that never-

theless have earned the right to walk alongside some of the bigger names. And in a year that saw Apple head off in new directions, some of our Editors' Choice nods go to worthy winners that are off the beaten path.



# HARDWARE



Hardware of the Year

## iPhone

The iPhone (★★★★; [macworld.com/2957](http://macworld.com/2957)) was certain to dominate headlines from the moment Steve Jobs first unveiled it. The more impressive feat, however, was living up to the hype. But that's exactly what the iPhone did upon its June debut. Other handheld devices have incorporated a touch-screen interface—but few can boast of one as elegant and intuitive as what the iPhone has to offer. Many phones claim to provide Internet connectivity—few have pulled off the “no compromises” version of the Internet that the iPhone delivers. Are there flaws? Sure—the phone is still missing obvious features. And even though Apple will let outsiders develop something other than Web-based apps for the iPhone starting in February, we wish the company would have more quickly embraced the many third-party apps that have sprung up to make the iPhone even more powerful. But these are minor quibbles. Just as the Macintosh changed personal computing in 1984 and the iPod did the same for digital music in 2001, the iPhone heralds a dramatic shift in the future of smart phones. —PHILIP MICHAELS

\$399; Apple, [www.apple.com](http://www.apple.com)



Music Player

## iPod nano

Buying an iPod nano used to mean giving up features for a compact size. But the third-generation iPod nano (★★★★½; [macworld.com/3231](http://macworld.com/3231)) changed all that by providing essentially the same features as the full-size iPod classic in a smaller package. While you don't get the classic's cavernous storage capacity or larger screen, you do get everything else—video playback and output, a crystal-clear screen, iPod games, and stereo audio recording—along with superior battery life, skip-free performance, and a lower price.

—DAN FRAKES

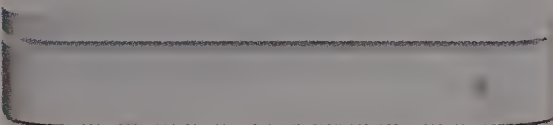
4GB, \$149; 8GB, \$199; Apple, [www.apple.com](http://www.apple.com)

Wireless Router

## AirPort Extreme with Gigabit Ethernet

The new AirPort Extreme Base Station Apple released in January 2007 was simpler to configure than the previous model, had better range, and supported the speedy new 802.11n wireless networking standard. Apple corrected our only major gripe about the original model with the August release of a revamped AirPort Extreme (★★★★½; [macworld.com/3109](http://macworld.com/3109)), which added Gigabit Ethernet support. That addition speeded up both wired connections and the base station's internal Ethernet connections, boosting wireless performance. —DAN MILLER

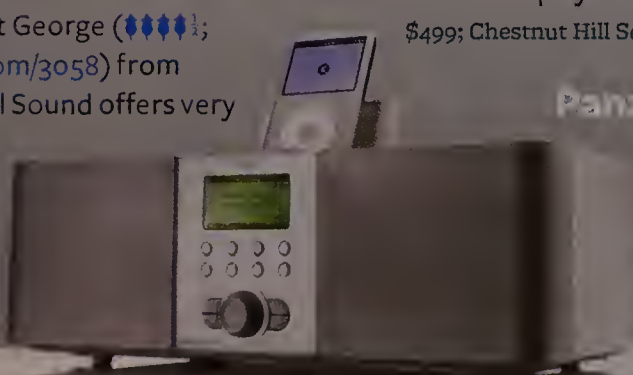
\$179; Apple, [www.apple.com](http://www.apple.com)



## MORE TOP HARDWARE

George

The compact George (★★★★; [macworld.com/3058](http://macworld.com/3058)) from Chestnut Hill Sound offers very good sound quality, but the most unique feature of the



iPod speaker system is its detachable control panel. Pop it off, and the panel becomes a wireless, handheld remote that mirrors your iPod's own menus on its LCD display. —DAN FRAKES

\$499; Chestnut Hill Sound, [www.chillsound.com](http://www.chillsound.com)

## Panasonic HDC-SD1

The user-friendly Panasonic HDC-SD1 shoots superb high-definition video with clear sound and accu-

rate colors, but this three-CCD camcorder can also record the AVCHD video format on SD/SDHC memory cards. That will save you both money—SD/SDHC memory cards are very affordable compared to MiniDV tapes—and heft, as the cards are feather-light. The HDC-SD1 itself weighs less than a pound. It's a big step forward in the tapeless camcorder revolution. —BRIAN CHEN

\$1,299; Panasonic, [www.panasonic.com](http://www.panasonic.com)







Digital SLR Camera

## Nikon D40 Digital SLR

You'll find a number of great digital SLRs on store shelves at the moment, but for my money, the Nikon D40 (★★★★; [macworld.com/2498](http://macworld.com/2498)) is the best value out there. The D40 offers a lightweight, compact body, high-end features, and a useful information display that helps novice photographers become familiar with the camera's settings. Most important, it takes beautiful photos. Although at 6 megapixels it offers a lower resolution and a slightly slower burst mode than its 10-megapixel D40x sibling, the D40 is also significantly less expensive—just \$550 with a lens. It's a great match for weekend shooters looking to explore digital photography in greater depth.—KELLY TURNER

\$550; Nikon, [www.nikon.com](http://www.nikon.com)

Photo Printer

## Epson PictureMate Zoom PM 290

The Epson PictureMate Zoom PM 290's (★★★★½; [macworld.com/3102](http://macworld.com/3102)) array of useful, innovative features takes photo printing from your desk to the outside world (read the review on page 46). A convenient carrying handle makes it easy to transport the 6.6-pound printer, and a flip-up LCD screen lets you view and edit photos before printing. The PictureMate Zoom produces high-quality prints quickly and inexpensively—at an estimated price per print of 25 cents, making it the least-expensive portable photo printer to use. Yes, the Zoom is limited to the same 4-by-6-inch paper size as its predecessors, but those prints look superb.—BRIAN CHEN

\$200; Epson, [www.epson.com](http://www.epson.com)



Storage Device

## Drobo

Billed as “the world’s first storage robot,” Data Robotics’ Drobo (★★★★½; [macworld.com/3003](http://macworld.com/3003)) is serious about storage. Connect the multiple-bay hard-drive system to your Mac, and it will start backing up all of your data. It’s not a standard RAID device, but it performs RAID-like processes in the background, moving data between multiple drives via a complex but very secure backup scheme. It’s dead simple to operate, hiding its complexity in an attractive exterior. You can’t ask for much more from a robot.—ERIC SUESZ

\$499; Data Robotics, [www.drobo.com](http://www.drobo.com)

### MORE TOP HARDWARE continued

#### HP DesignJet Z3100 Photo Printer

For creative pros and professional photographers, the go-to printer of choice should be HP’s DesignJet Z3100 Photo Printer (★★★★; [macworld.com/3234](http://macworld.com/3234)), a wide-format device that is a marvel of form and function. Its secret weapon is its built-in i1 spectrophotometer (from X-Rite), which lets you create ICC profiles on-the-fly quickly and easily.—RICK LEPAGE

\$4,095; Hewlett-Packard, [www.hp.com](http://www.hp.com)

#### Epson MovieMate 72

Capable of much more than either a TV or a conference room projector, Epson’s Movie-

Mate 72 (★★★★; [macworld.com/3235](http://macworld.com/3235)) is a home theater projector that’s the first to offer high definition 720p resolution. It also includes high-quality integrated speakers, a built-in up-converting DVD player, and inputs for just about anything—your Mac desktop, USB thumb drives, gaming consoles, and TV receivers. An innovative, horizontally split design keeps the base and its inputs and outputs stationary, while the top half with the lens can rotate to project images in just about any direction.—JAMES GALBRAITH

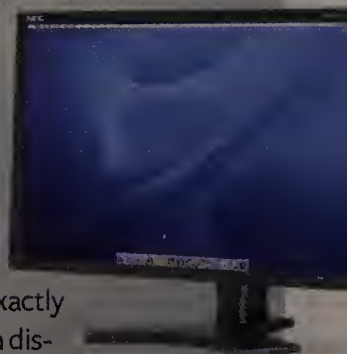
\$1,200; Epson, [www.epson.com](http://www.epson.com)



#### NEC MultiSync LCD2690WUXiSV

Accurate color is a necessity for professional photographers and designers, and the big, bright MultiSync LCD2690WUXiSV (★★★★; [macworld.com/2837](http://macworld.com/2837)) delivers exactly that across its 26-inch display. Its bundled spectrophotometer and hardware-calibration features make the MultiSync LCD2690WUXiSV a tool all serious color geeks should consider.—JAMES GALBRAITH

\$1,500; NEC, [www.necdisplay.com](http://www.necdisplay.com)







### OWC Mercury Rack Pro™ 4-Bay 1U RackMount Storage Solution

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# SOFTWARE



Software of the Year

## Mac OS X 10.5

Appearing two and a half years after its predecessor—and later than expected, due to an iPhone-triggered delay—OS X 10.5 (★★★★; [macworld.com/3228](http://macworld.com/3228)) is the next step in the continuing evolution of the Mac's operating system. And it's quite a step, boasting more than 300 features and enhancements. Not all of those are major changes, but the OS X update known as Leopard features some real innovations—enough to make it a marked improvement over the already solid Tiger. Mac users may not always appreciate what a massive undertaking it is to produce a major operating system update. Users on other platforms—we're thinking of you, poor Vista adopters—can't take it for granted that the latest version of their OS will always deliver more improvements than headaches. Generally Mac users can, and Leopard continues that tradition. OS X 10.5 builds on 10.4's strong foundation and adds a number of innovative features that make it a compelling upgrade for Mac users.—ROB GRIFFITHS

\$129; Apple, [www.apple.com](http://www.apple.com)

Video Converter

## HandBrake 0.9

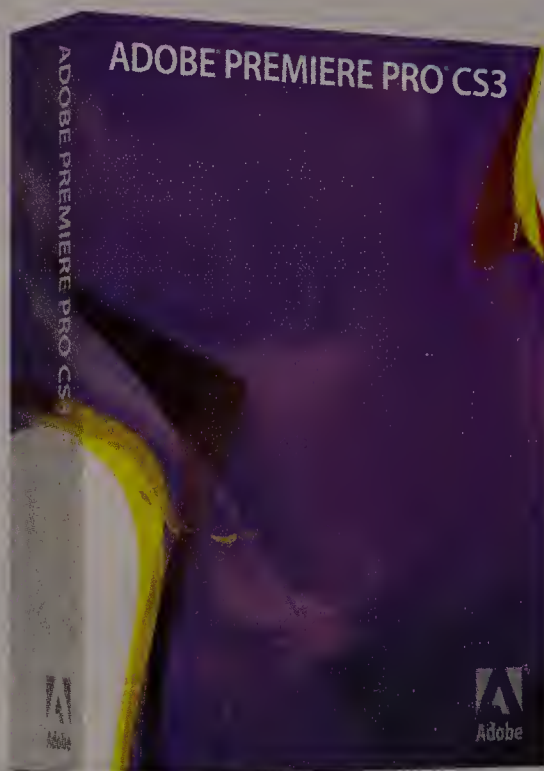
You've got a library full of DVDs you've bought and paid for and a slew of video-enabled digital devices (an iPod, iPhone, or Apple TV), but no way to get the former onto the latter, thanks to copy-protection technology that prevents you from ripping a DVD the way you would a CD. HandBrake



(★★★★½; [macworld.com/3104](http://macworld.com/3104)) can solve your problem. Just insert a commercial DVD, choose from HandBrake's list of presets for movie-watching devices, and click on Start. You'll wind up with a space-saving video file

you can watch on your Mac or sync to your iPod, iPhone, or Apple TV. Can HandBrake be used for less-than-honorable purposes? Sure—but the same could be said of many programs in the age of digital content. That doesn't take away from HandBrake's usefulness in letting you enjoy the DVDs you own across other devices.—DAN FRAKES

Free; [macworld.com/2468](http://macworld.com/2468)



Video Editing

## Adobe Premiere Pro CS3

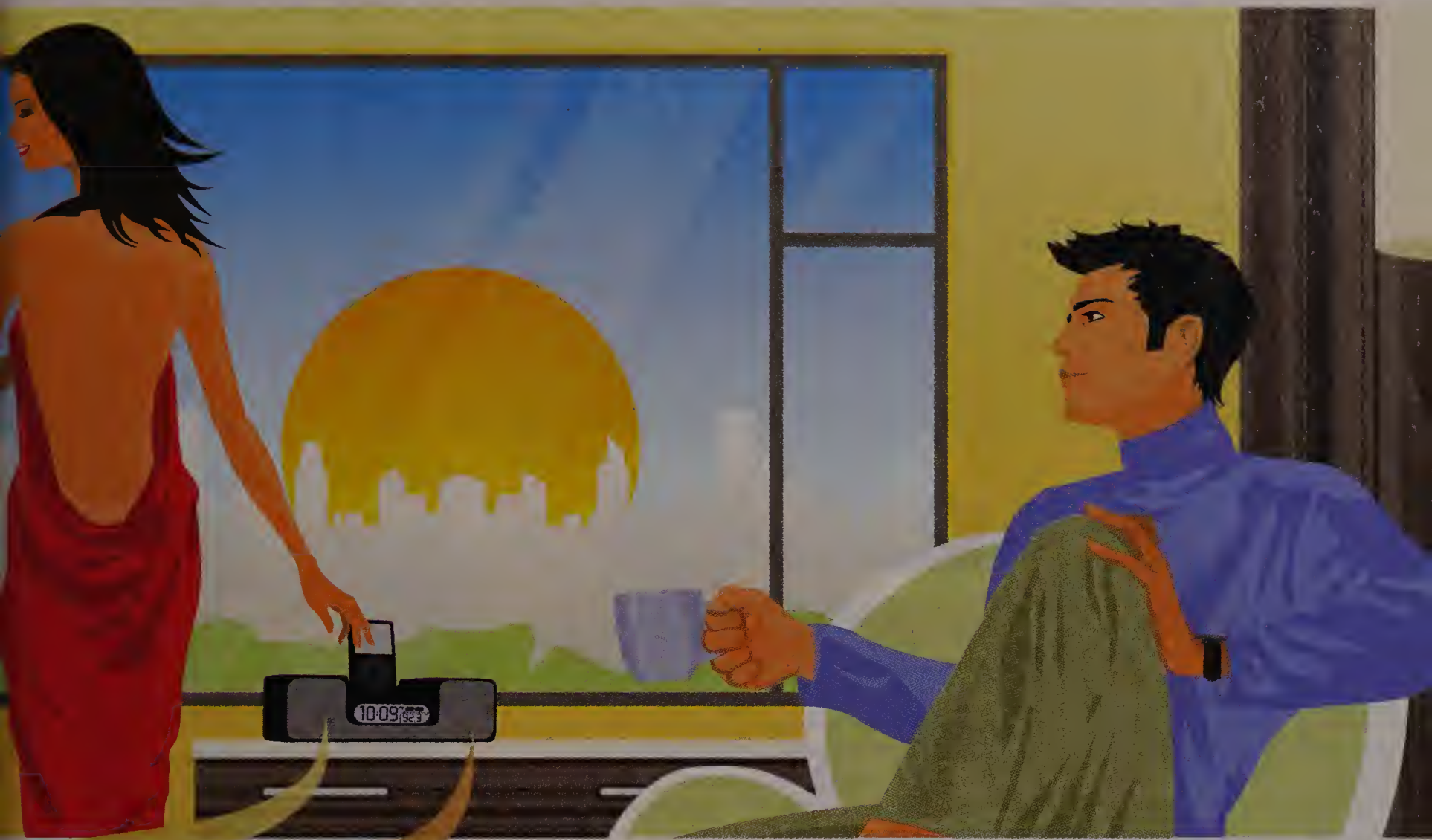
Digital video pros and enthusiasts shed few tears when Adobe pulled the plug on the Mac version of its DV-editing program in 2003. After all, it was hard to mourn the loss of sluggish performance and unwieldy controls when DV editors had more elegant tools at their disposal. So it's to Adobe's credit that when it decided to revive Premiere on the Mac, it delivered a program that had little in common with its awkward

predecessor. The Intel-only Premiere Pro CS3 (★★★★; [macworld.com/3023](http://macworld.com/3023)) adopts a number of professional features, from an efficient interface to support for multiple and nested sequences. Gone is the limited approach to editing that dogged Premiere 6.5, in favor of an industry-standard model that editors can embrace. Premiere Pro CS3 takes a unified approach to transitions and effects, and the inclusion of the DVD-authoring program Encore CS3 offers one of the better DVD-creation tools on the Mac. Adobe has done more than just correct past mistakes—it has introduced a completely new program to the Mac that broadens video editors' choices.—PHILIP MICHAELS

\$799; Adobe, [www.adobe.com](http://www.adobe.com)



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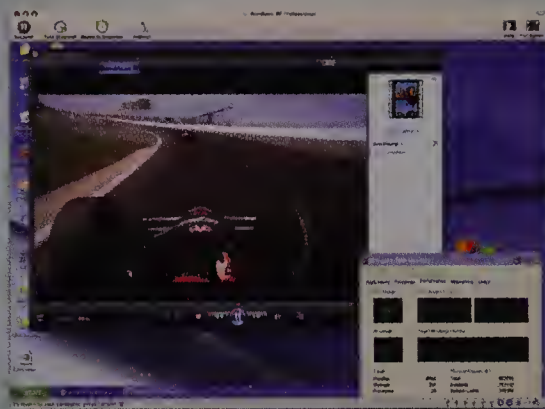


## Virtualization Program

### VMware Fusion

Anyone who needs to branch out to other operating systems on a Mac should welcome VMware Fusion (★★★★; [macworld.com/3116](http://macworld.com/3116)). It has already inspired competitors to add features. Fusion also gives you access to VMware's huge collection of appliances, ready-to-run software packages you can download and install. —ROB GRIFFITHS

\$80; VMware, [vmware.com](http://vmware.com)

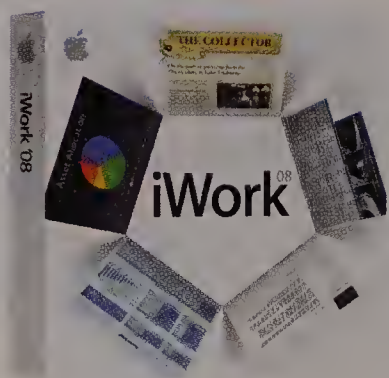


## Audio Recording

### WireTap Studio

Plenty of tools record podcast interviews, convert LPs and tapes to digital audio files, and capture streaming audio. But none are as easy to use as Ambrosia Software's WireTap Studio (★★★★; [macworld.com/3236](http://macworld.com/3236)), which records any sound produced by my Mac with lossless quality. It also allows me to edit that audio nondestructively, in one of the most intuitive audio editors I've used. —CHRISTOPHER BREEN

\$69; Ambrosia Software; [www.ambrosiasw.com](http://www.ambrosiasw.com)



## Productivity Suite

### iWork '08

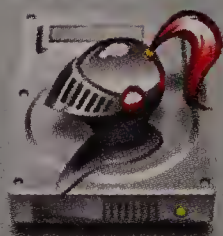
The search for a good all-around office productivity suite no longer begins and ends with Microsoft Office. iWork '08 now figures into the mix. Keynote (★★★★; [macworld.com/3043](http://macworld.com/3043)) was already an impressive presentation tool; now it has gained path animation, text effects, and transitions. Once a limited page-layout tool, Pages '08 (★★★★; [macworld.com/3041](http://macworld.com/3041)) offers

both writing and layout modes. And the new Numbers (★★★★; [macworld.com/3042](http://macworld.com/3042)) brings a fresh, multiple-tables-per-page approach to spreadsheets. —ROB GRIFFITHS

\$79; Apple, [www.apple.com](http://www.apple.com)



## MORE TOP SOFTWARE



### DiskWarrior 4

The long-awaited Intel-native version of the utility DiskWarrior 4 (★★★★; [macworld.com/2503](http://macworld.com/2503)) adds features

for ferreting out corrupted preference files, repairing OS X permissions, mending and rebuilding access control lists, and fixing more types of disk problems than previous versions could handle. DiskWarrior remains as valuable today as it ever was. —ROB GRIFFITHS

\$100; Alsoft, [www.alfsoft.com](http://www.alfsoft.com)

### Logic Studio

Apple's Logic offering has always packed in plenty of features; the problem has been accessing them. Logic Studio (★★★★; [macworld.com/3180](http://macworld.com/3180)) has more

than solved that problem with a single-window design in Logic Pro 8 that allows

users to perform a host of functions without having to switch constantly between open windows. And even as it streamlines things, Apple continues to add capabilities. The new Main Stage turns your Mac into a live performance rig, and Studio Instruments includes 40 instrument plug-ins. —JIM DALRYMPLE

\$499; Apple, [www.apple.com](http://www.apple.com)

### Billings 2.5

With Billings (★★★★; [macworld.com/2658](http://macworld.com/2658)), Marketcircle adroitly walks the line between packing the time-tracking and invoice-

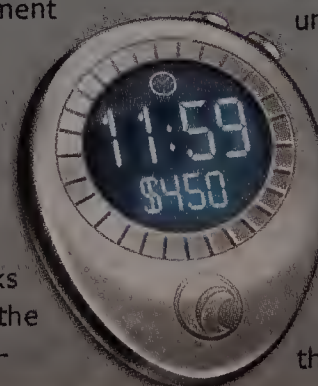


creation tool with features and keeping it simple to use. Billings' features give you the power to customize tax rates and invoice templates and track billable hours with a free-floating timer; at the same time, a setup assistant makes it a breeze to get started without any fuss. —PHILIP MICHAELS

\$59; Marketcircle, [www.marketcircle.com](http://www.marketcircle.com)

### LightZone 3.0

With Light Crafts' LightZone (★★★★; [macworld.com/3053](http://macworld.com/3053)), you get an efficient, streamlined piece of software that offers a unique approach to photo editing for a good deal less than what you'd pay for Photoshop. The program's signature feature, the ZoneMapper tool, lets you see the tonal range of your images by dividing your photos into 16 shades of gray that represent tonal differences of half an f-stop. Mouse over any shade, and the corresponding areas show up in





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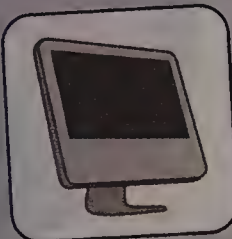


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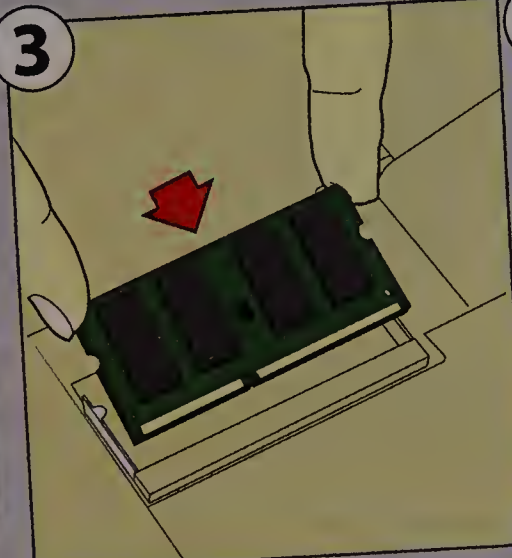
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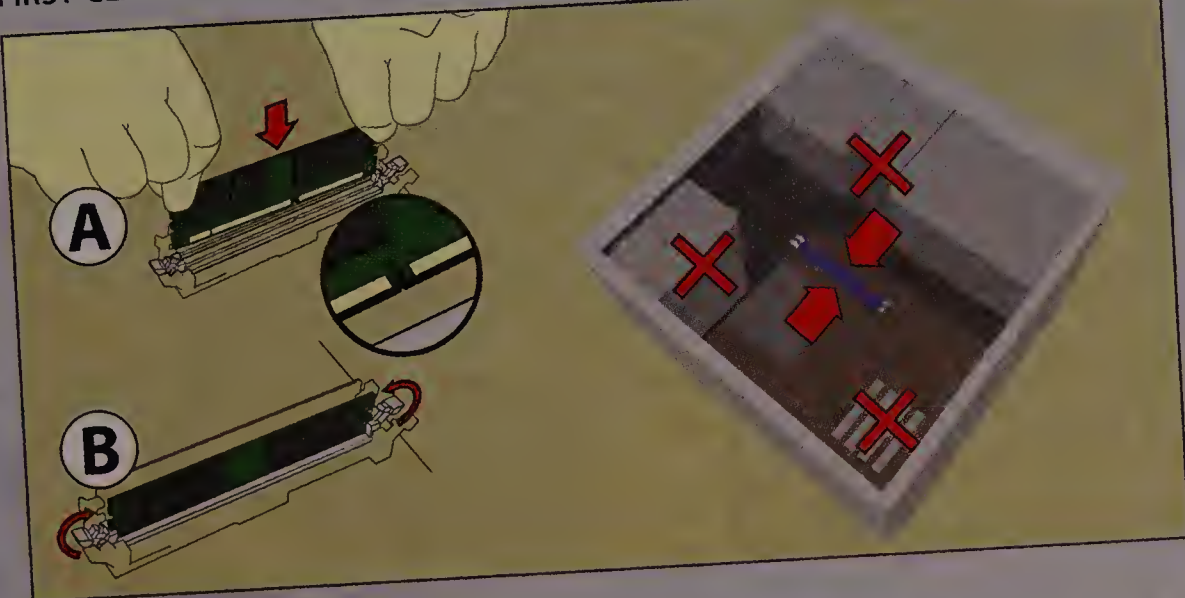
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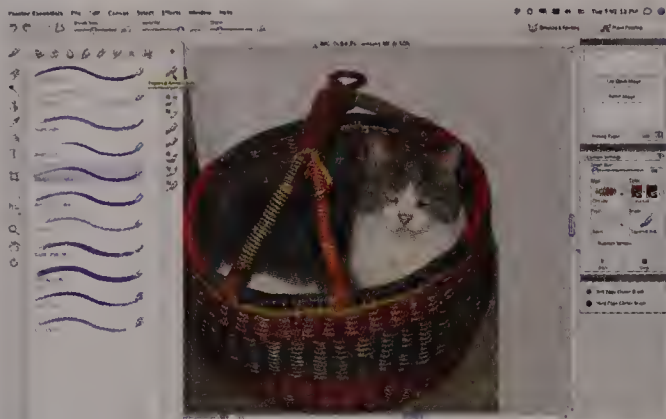
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Creative Tool

## Painter Essentials 4

Don't dismiss Painter Essentials 4 (★★★★; [macworld.com/3171](http://macworld.com/3171)) as merely a stripped-down version of Corel's Painter X. While it offers a friendly way to apply painterly effects to photos, Painter Essentials has much of the power found in the pro-level Painter. It features a completely redesigned workspace—distinct from Painter X—which makes it a snap for new users to get started. Corel has also improved the “smart stroke” technology, which paints strokes to follow the form of the original photo.—JACKIE DOVE

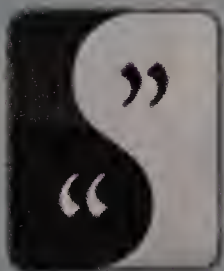
\$100; Corel, [www.corel.com](http://www.corel.com)

Writer's Tool

## Scrivener

There are as many different approaches to writing as there are aspiring novelists, so a good writing program has to be extremely flexible—and Scrivener is. Literature & Latte's Scrivener (★★★★½; [macworld.com/2731](http://macworld.com/2731)) can break your manuscript into individual chapters, or edit it as a whole. A Search function helps you track down that character you mentioned one time 70,000 words back. Built-in outline and corkboard views let you plot where you're going and track events and characters. But most important, Scrivener knows when to get out of your way and let you focus on your writing.—JASON SNELL

\$40; Literature & Latte, [literatureandlatte.com](http://literatureandlatte.com)



Blog Publisher

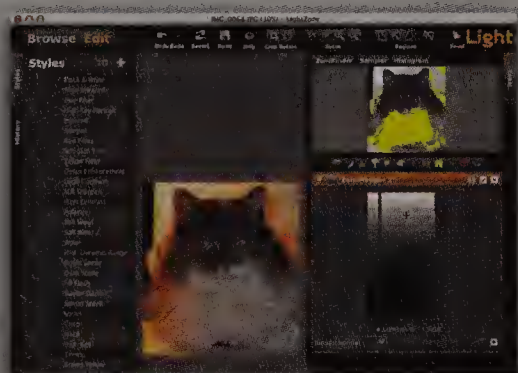
## MarsEdit 2

Most blogging platforms that let you post on the Internet rely on often-clunky Web interfaces. Mac users who've come to expect a more elegant approach can turn to Red Sweater Software's beautiful Mac-like program MarsEdit 2 (★★★★; [macworld.com/3237](http://macworld.com/3237)), which makes updating a blog as simple and intuitive as dashing off an e-mail. MarsEdit offers compatibility with all the major blogging platforms, as well as the ability to manage multiple blogs, upload images and files, and design templates that let you see what a post will look like before it goes live.—DAN MOREN

\$30; Red Sweater Software, [www.red-sweater.com](http://www.red-sweater.com)



### MORE TOP SOFTWARE continued



the ZoneFinder display, a gray-scale miniature of the image you're working on. LightZone truly provides maximum control over images at a competitive price.—JACKIE DOVE

\$250; Light Crafts, [www.lightcrafts.com](http://www.lightcrafts.com)

## Popcorn 3

Popcorn's ability to convert video files to different formats—for burning to a CD or DVD or for putting on a portable device—already made it a useful utility. But Popcorn 3 (★★★★½; [macworld.com/3239](http://macworld.com/3239)) is

even better now that Roxio has added TiVoToGo support, letting you transfer TV shows recorded on a TiVo DVR to a Mac, where you can encode them like any other file format.—PETER COHEN

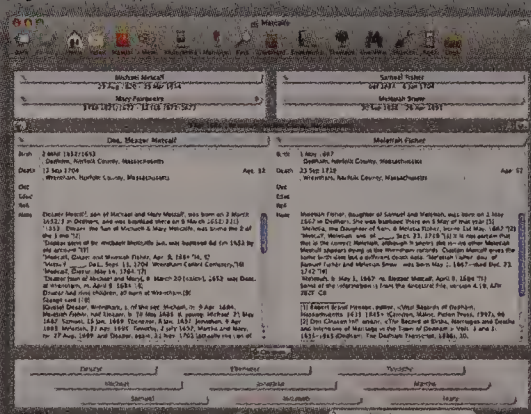
\$50; Roxio, [www.roxio.com](http://www.roxio.com)

## Reunion 9

Plenty of Mac programs help you collect and organize data on your family tree, but only Leister Productions' Reunion (★★★★; [macworld.com/2734](http://macworld.com/2734)) combines stylish utility with ease of use. Leister rewrote the lat-

est version to include some Apple-inspired features—the main window, for example, includes a search box that's reminiscent of iTunes, iPhoto, and Safari. A multimedia window lets you store and display a variety of image and video files—plus it can present slide shows of your photos within the program.—JACKIE DOVE

\$99; Leister Productions, [www.leisterpro.com](http://www.leisterpro.com)



## Amadeus Pro

There just isn't an under-\$50 audio editor as capable and intuitively designed as HairerSoft's Amadeus Pro (★★★★; [macworld.com/3240](http://macworld.com/3240)). And though you're paying a low price, you're not getting shortchanged on features in the name of frugality: Amadeus Pro includes extensive multitrack editing, waveform analysis tools, batch processing, click and noise repair, and support for just about any file format you'd care to throw at it.—CHRISTOPHER BREEN

\$40; HairerSoft, [www.hairersoft.com](http://www.hairersoft.com)



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# READERS' CHOICE AWARDS

Macworld editors aren't the only ones who get to pick their favorite hardware and software at this time of year—since our 2004 awards, we've also invited you to sound off on your favorites.

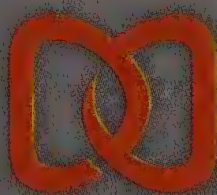
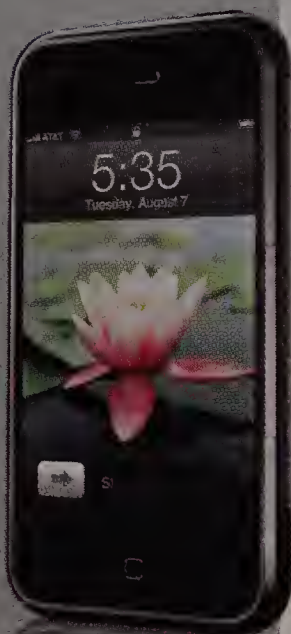
**Apple Product of the Year** Readers clearly believed that this was the year of the **iPhone**. Apple's mobile phone was a runaway winner. *Also Nominated:* AirPort Extreme Base Station, iMac Core 2 Duo, iPod touch, iWork '08, and Mac OS X 10.5.

**Third-Party Hardware of the Year** If the iPhone won by the biggest margin, this category saw the closest competition, with the **Nikon D40X** just edging out LaCie's Big Disk Extreme hard drive. *Also Nominated:* Canon's HV20 camcorder, Canon's PowerShot A650 IS camera, Logitech's VX Nano Cordless Laser Mouse, and Newer Technology's mini-Stack v3 hard drive.

**Third-Party Software of the Year** Parallels won the 2006 Software of the Year award with its debut virtualization offering on the Mac. It pulled off a repeat win in 2007 with **Parallels Desktop 3**, though not without some spirited support

among readers for the Adobe Photoshop CS3 image-editing software and fellow virtualization program VMware Fusion. *Also Nominated:* Ambrosia Software's WireTap Studio audio editor, ProjectWizards' Merlin 2 project-management software, and Roxio's Toast 8 Titanium disc-burning software.

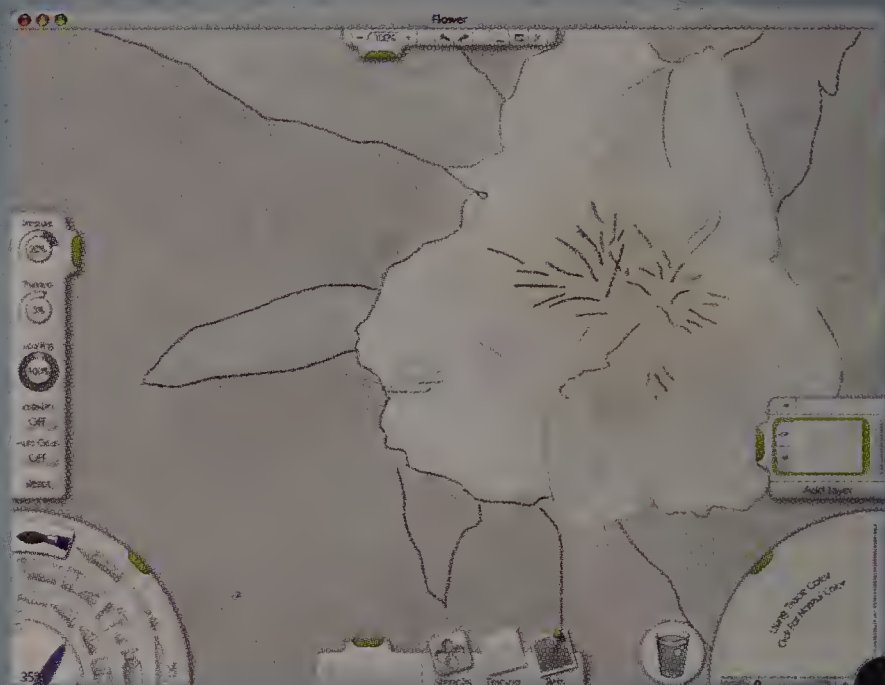
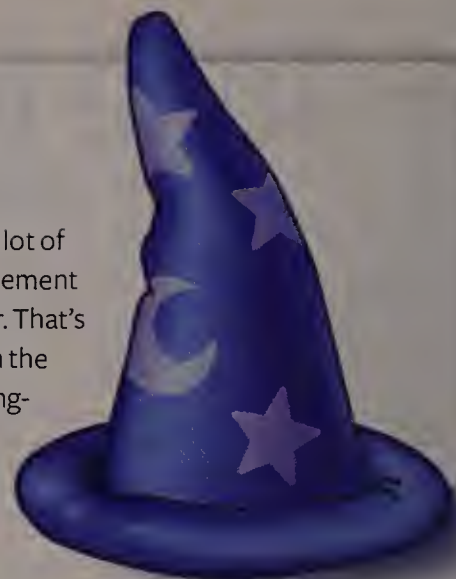
**Mac Gem of the Year** We wanted to make sure even the smallest apps got their due, so we asked readers to pick their favorite program under \$50. The choice, by a comfortable margin, was **HandBrake**. *Also Nominated:* Agile Web Solutions' 1Password password-management utility, Bartek Bargiel's iGTD to-do list manager, Literature & Latte's Scrivener writing tool, Red Sweater Software's MarsEdit 2 blog publisher, and Zykloid Software's Posterino poster-size-collage builder.



## Project Management **Merlin 2**

Mac users aren't accustomed to having a lot of choices when it comes to project-management software—at least not until this past year. That's when a number of programs emerged on the Mac, giving project managers choices ranging from AEC's venerable FastTrack Schedule to Omni Group's promising OmniPlan. But it was Project Wizards' Merlin 2 (★★★★½; [macworld.com/2664](http://macworld.com/2664)) that caught our eye, thanks to its ease of use and intuitive features. Merlin's single-user interface and side panels help you create quick Gantt charts and add associated details to project activities. Most of us were drawn to the Mac platform in the first place because of the promise of easily handling seemingly complex tasks; Merlin embraces that spirit and ensures that the most difficult part of your project won't be dealing with the software you're using to manage it. —PHILIP MICHAELS

€145; Project Wizards, [www.merlin2.net](http://www.merlin2.net)



## Painting Tool **ArtRage 2.5**

The Mac market boasts plenty of high-priced, multifeatured paint programs—namely Adobe's Photoshop and Corel's Painter—but where's a dabbler on a budget to turn? Ambient Design's \$25 ArtRage 2.5 (★★★★½; [macworld.com/3238](http://macworld.com/3238))—a natural-media paint program with a price that belies the software's power. Not only does ArtRage offer a wide variety of media (including oil, pencil, airbrush, glitter, and chalk), but you can extensively control that media by modifying such factors as a tool's pressure and angle. You can also choose the material used for the canvas, add layers, and trace over imported images. Professionals and amateurs alike will find ArtRage a valuable addition to their electronic paint box. —CHRISTOPHER BREEN

\$25; Ambient Design, [www.ambientdesign.com](http://www.ambientdesign.com)





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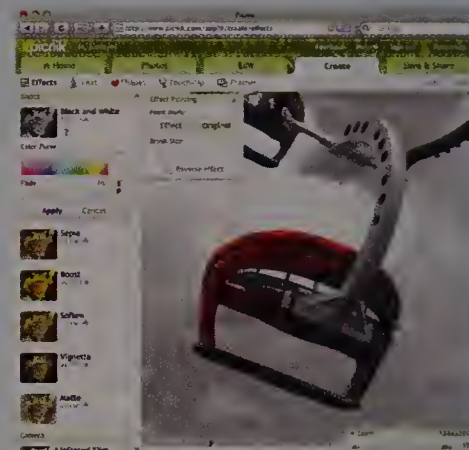
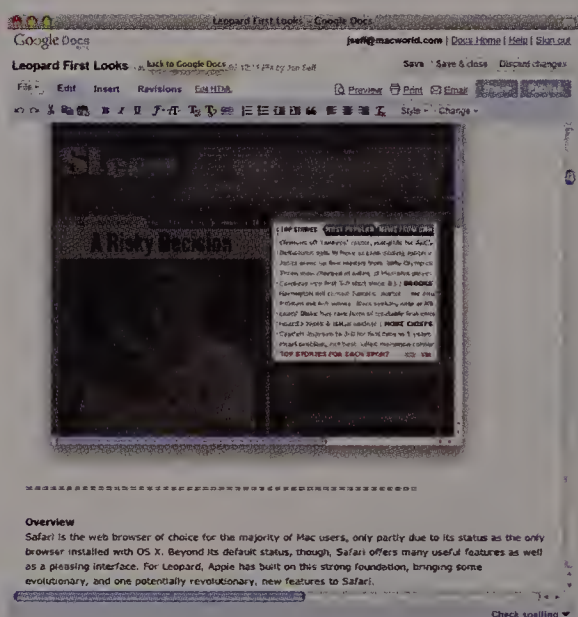
Over the last four years, Apple's iTunes Store has ruled the online roost for purchased music, and for good reason—its tracks and albums are affordable, its selection is great, and the music is easy to find and download. But it left room for improvement in the form of higher-quality audio encoding, removal of copy protection, and a more flexible pricing structure. Then Amazon MP3 came on the scene—not only did the online music store offer all of its wares in unprotected MP3 form, but it provided them at a higher bit rate than that of iTunes' protected tracks (though at the same rate as unprotected iTunes Plus tracks). And Amazon offered all this for prices usually lower than what iTunes was charging at that time. Amazon has provided us with two valuable services. It offers a high-quality alternative to the iTunes Store—and it was instrumental in pushing Apple to slash the price of iTunes Plus tracks and strip the copy protection from independent artists' releases. Competition is a beautiful thing.—CHRISTOPHER BREEN

Amazon.com, [www.amazon.com](http://www.amazon.com)

## Online Productivity Tools Google Apps

Microsoft Office may still be king of the office—Apple's beefed-up iWork notwithstanding—but Google is taking a stand with its own collection of business apps. The difference is, these productivity tools—known collectively as Google Apps—live online. Using Google Apps, families, businesses, and classrooms can create a customized Web portal that combines e-mail (Gmail); group scheduling (Google Calendar); collaborative online writing and editing of documents, spreadsheets, and presentations (Google Docs); chat (Google Talk); and Web page building (Google Page Creator). You control what's there and who can access it. And best of all, the basic version is absolutely free. It's got its quirks (like incompatibility with Safari as of this writing), but Google's online suite is certainly ready for real-world use—here at Macworld we used the Docs feature to edit our digital Superguides and consolidate our Leopard coverage. Google Apps isn't ready to topple your desktop-based suite—not yet, anyhow—but it is an impressive glimpse into the future of online tools.—JONATHAN SEFF

Standard Edition, free; Premier Edition, \$50 per user, per year; Google, [www.google.com/a](http://www.google.com/a)



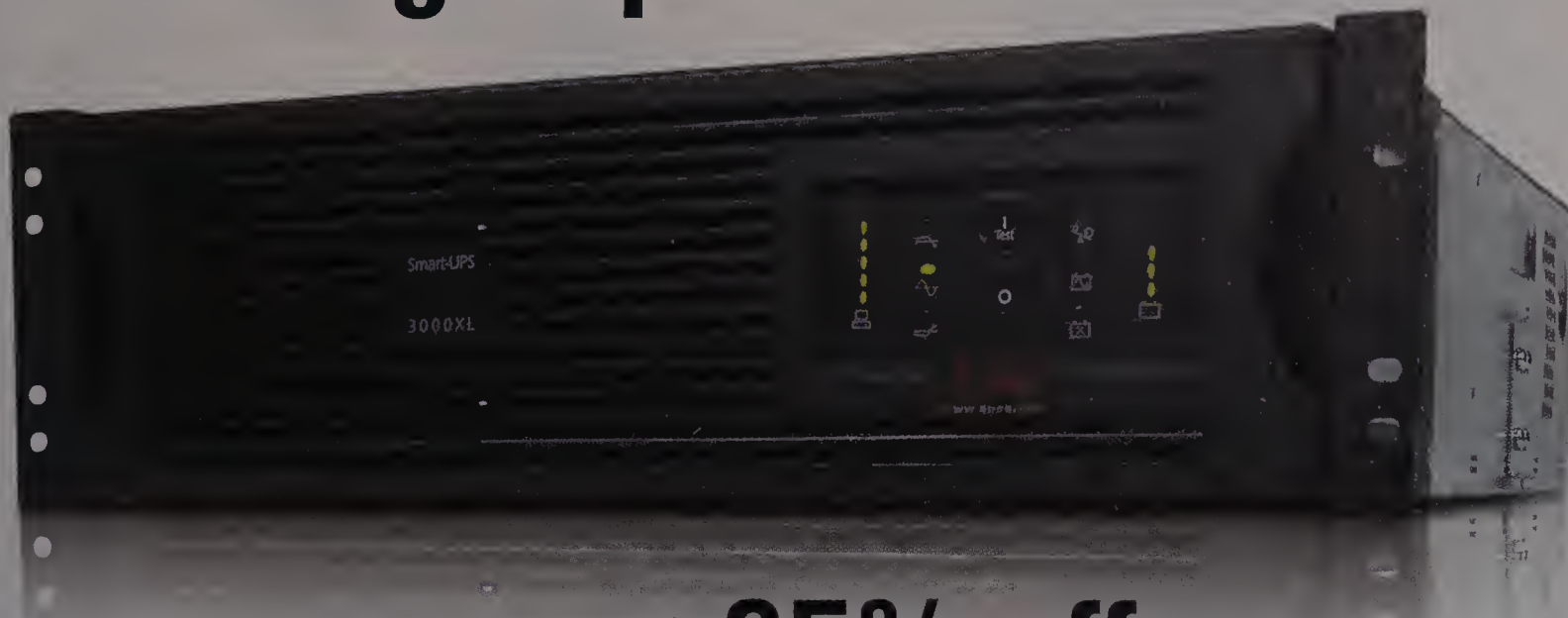
## Online Image Editor Picnik

Between camera phones, Wi-Fi-enabled cameras, and the rise of sites such as Flickr and Facebook, photos are increasingly heading straight from the camera to the Web, bypassing traditional image editors in the process. But that doesn't mean these snapshots wouldn't benefit from a few nips and tucks. That's where Picnik.com (4444; [macworld.com/3166](http://macworld.com/3166)) fits in. This online image editor connects with social networking sites, blogs, and even your own hard drive to let you access photos and make sophisticated edits. (Flickr users can access Picnik's tools without even leaving the site.) For example, in addition to handling the basics—exposure, saturation, and red-eye removal—you can paint on a blur effect, draw notes and doodles, apply frames, and enhance colors. Even more impressive is the speed at which all of this happens—the site is as responsive as a desktop program. (And it gets updated more frequently than a desktop program.) Picnik's also smart: when you save the files, you can choose to overwrite the original or keep both versions. Close your browser, and your work-in-progress will be waiting for you when you return. Best of all, this Web-based editor is free (though a \$25-a-year premium site offers more-advanced editing tools and other features).—KELLY TURNER

Free; Picnik, [www.picnik.com](http://www.picnik.com)



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## The best iPod and audio gear of 2007

# PLAYS OF THE YEAR

BY MACWORLD STAFF

ILLUSTRATION BY JOSHUA GORCHOV

Last year was a funny one for the iPod.

Before Apple released its new iPod lineup in September, the iPod had been largely unchanged for two years. The full-size video iPod had stayed pretty much the same since its introduction in September 2005. The 2006 iPod nano was basically a moderately updated version of the 2005 original. Only the iPod

shuffle had seen a dramatic—albeit entirely aesthetic—overhaul. Yet the iPod juggernaut rumbled on: Apple sold more iPods in 2007 than in any year before. And those two years of design stability gave accessory vendors the security of knowing that the products they developed would work with most available iPods.

So although there weren't many unique or groundbreaking iPod accessories in 2007, there were improved offerings in many accessory categories. With that in mind, we sifted through all the products we saw in 2007 (or to be more accurate, products released and available for purchase between November 1, 2006, and November 1, 2007). Here are our favorites.



# SPEAKERS

According to market-research firm NPD, MP3-player speakers—the majority of which are designed specifically for the iPod—outsold home speakers for the first time in 2007. Longtime accessory vendors released more models than ever, traditional audio manufacturers entered the fray, and scores of new companies jumped at the chance to make a few bucks. We saw several new designs that wowed us (see “Special Plays”), as well as some impressive traditional models.



PURE-FI  
ELITE

## Desktop Speakers

When it comes to one-piece desktop speaker systems with an iPod dock, **Logitech's Pure-Fi Elite** and **AudioStation** (★★★★½; [macworld.com/3193](http://macworld.com/3193)) stand out. Each includes an AM/FM radio and a clock; they also compete with last year's winner, JBL's Radial (★★★★½; [macworld.com/3194](http://macworld.com/3194)), as two of the best-sounding iPod systems in this category. (The Pure-Fi Elite is an updated version of the AudioStation; the latter is still available, often at a discount.)

\$300 each; Logitech, [www.logitech.com](http://www.logitech.com)

## Portable Speakers

For lightweight listening on-the-go, **Altec Lansing's inMotion iM600** (★★★★½; [macworld.com/3195](http://macworld.com/3195)) impressed us more than any other 2007 offering. In addition to being the best-sounding system that can fit in a carry-on or a backpack, the sturdy iM600 includes an FM tuner, a built-in rechargeable battery, and a remote control.

\$150; Altec Lansing, [www.alteclansing.com](http://www.alteclansing.com)

## Special Play: George

Perhaps the most technologically advanced iPod speaker system on the market, **Chestnut Hill Sound's George** is also a 2007 *Macworld* Eddy winner (see page 74).

\$499; Chestnut Hill Sound, [www.chestnuthillsound.com](http://www.chestnuthillsound.com)

## Value Speakers

One benefit of the deluge of iPod speaker systems is that \$125 to \$150 now gets you quality that cost twice that much a year or two ago. We were especially impressed by the value of **Logitech's AudioStation Express** (★★★★½; [macworld.com/3196](http://macworld.com/3196)), which you'll easily find for as little as \$60. This basic iPod speaker provides solid sound quality, can run off battery or AC power, and comes with a padded tote.

\$80; Logitech, [www.logitech.com](http://www.logitech.com)

## Computer Speakers

If you're looking for a set of traditional computer speakers, **Acoustic Energy's Aego M** (★★★★½; [macworld.com/3197](http://macworld.com/3197)) is tough to beat. Tiny metal-alloy satellites and a



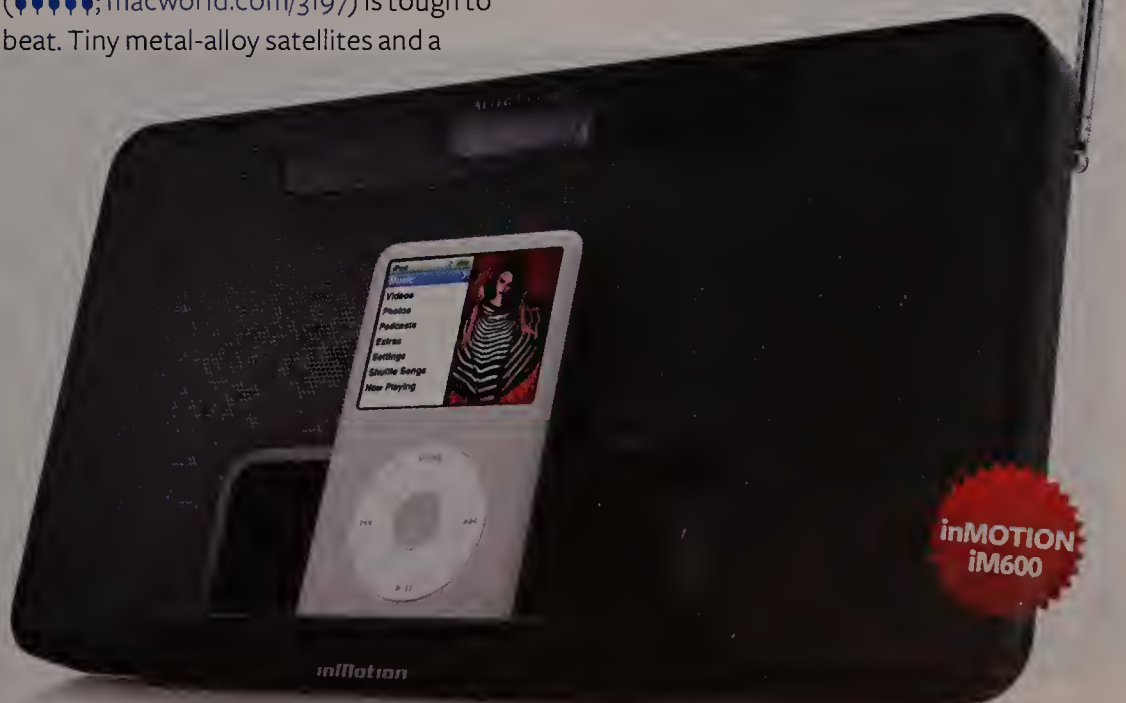
## Special Play: Zeppelin

The **Bowers & Wilkins Zeppelin** is sure to get plenty of attention for its design alone: a curvy, pill-shaped package with a black mesh front and a shiny chrome back. The iPod-docking arm in front lets you wrap your hand around the iPod to operate it. But the Zeppelin also sounds great: B&W has stuffed many of its home-speaker technologies, as well as five drivers and three amplifiers, inside the sleek enclosure. A matching black-and-chrome, pebble-shaped remote rounds out the package.

\$600; Bowers & Wilkins, [www.bowers-wilkins.com](http://www.bowers-wilkins.com)

large real-wood subwoofer provide exceptional sound quality, and the Aego M includes a variety of high-quality connection cables. We've never heard sound this good for \$200.

\$200; Acoustic Energy, [www.acoustic-energy.co.uk](http://www.acoustic-energy.co.uk)



inMOTION  
iM600



# HEADPHONES

Upgrading from the default earbuds is one of the best investments an iPod owner can make. In 2007, we saw plenty of new and improved headphones, both in-ear-canal and noise-canceling models. (See [macworld.com/2709](http://macworld.com/2709) for more details on in-ear-canal headphones.)

## In-Ear-Canal Headphones

If cost is no object and you listen primarily to high-quality music files, **Ultimate Ears' triple.fi 10**

**Pro** sets the bar for in-ear-canal headphones in 2007. With three separate drivers—for

bass, midrange, and treble—in each ear, the triple.fi 10 is essentially a universal-fit version of Ultimate Ears' custom-made in-ear monitors; it provides top-notch sound quality and noise isolation. Although not quite as comfortable as last year's winner, Shure's E500PTH, the triple.fi 10 costs \$100 less than Shure's flagship model.

\$400; Ultimate Ears, [www.ultimateears.com](http://www.ultimateears.com)

## All-Purpose Headphones

For people who don't want to spend more on their headphones than they did on their iPod, or who don't like the near-complete isolation of true in-ear-canal headphones, **V-Moda's Vibe** and **Vibe Duo** are among our favorites. Using a "canalbud" design—halfway between in-ear-canal headphones and earbuds—the Vibes block a decent amount of external sound without completely silencing the rest of the world. Their performance doesn't match that of higher-end headphones, but they provide surprisingly good audio quality, with an emphasis on bass response, in a pack-

age that's also very comfortable. And the Vibes look great, thanks to metal-alloy construction and a variety of stylish color choices. The Vibe Duo is made for the iPhone; it includes a slimmer headphone plug that fits the iPhone's port, an in-line microphone, and a phone/playback controller similar to the one on Apple's iPhone earbuds.

\$100 each; V-Moda, [www.v-moda.com](http://www.v-moda.com)

## Noise-Canceling Headphones

Although we generally recommend in-ear-canal headphones for travel, noise-canceling headphones have their place. And

**Audio-Technica's ATH-ANC7**

([macworld.com/3198](http://macworld.com/3198)) is one of the few sets we can recommend without reservation. Like all noise-canceling models, the ATH-ANC7 samples external audio and then produces an inverse audio signal that cancels out a range of that sound while also letting you enjoy your music. The ATH-ANC7 is the rare model that blocks plenty of noise, is comfortable and sturdy, and sounds good; in



## Special Play: Go + Play

Although more transportable than portable, **Harman Kardon's Go + Play** is nevertheless a system you can take with you. But don't call it a boom box. The Go + Play is the most interesting-looking iPod speaker system on the market. Its bug-eyed metal speaker grills conceal high-performance, two-way speakers with dual-action woofers that produce the best audio quality of any carryable iPod speaker system we've heard. We also like its little touches such as a pop-open compartment for the system's radio frequency (RF) remote. In fact, the Go + Play sounds and looks good enough, and works well enough, to double as an excellent desktop stereo system—which makes its price tag seem much more reasonable.

\$350; Harman Kardon, [www.harmankardon.com](http://www.harmankardon.com)

fact, it's the best-sounding pair of noise-canceling headphones we've heard.

\$220; Audio Technica, [www.audio-technica.com](http://www.audio-technica.com)

## iPhone Accessories

The iPhone has been available for only a few months, and we haven't seen a full roster of accessories for it yet—so we can't really crown any as the year's best. Still, there are already a few standouts.

Cases are far and away the majority of accessories available for the iPhone, and as with the iPod, you have plenty of options and styles to choose from. If you're looking for the ever-popular silicone skin, there's **iSkin's Revo** ([macworld.com/3201](http://macworld.com/3201)).

For \$40, it will keep your iPhone fully protected while leaving most of its controls easily accessible. For more shock protection, check out **Contour Design's \$30 Showcase** ([macworld.com/3202](http://macworld.com/3202)), a clear-plastic shell with rubber edges that allows full use of the iPhone (although it doesn't protect the screen from impact). And if all you want is to keep the iPhone's touch-sensitive screen from getting scratched, look no further than **Power Support's Crystal Film Set** ([macworld.com/3203](http://macworld.com/3203)), a \$16 pair of rigid static-adhesive films that keep

the displays of two iPhones safe from nicks and scratches.

Of course, the iPhone has the potential for particular accessories the iPod never needed: Bluetooth headsets, for example. **Plantronics' Voyager 520** (\$100; [macworld.com/3204](http://macworld.com/3204)) may not be as flashy or svelte as some of the more-hyped headsets out there, but it excels in the right ways. It boasts eight hours of talk time and 180 hours of standby; its circuitry and wind-screen help cancel out







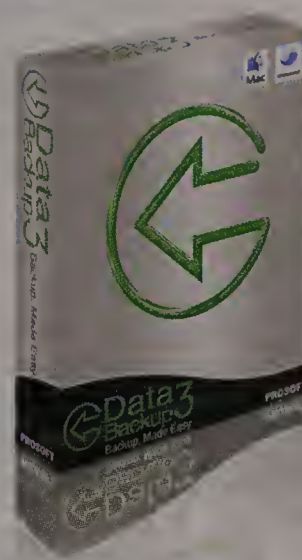
# Award-winning data recovery, hard drive maintenance and backup software from Prosoft Engineering



**Data Rescue II**  
#1 selling hard drive recovery software for the Mac.



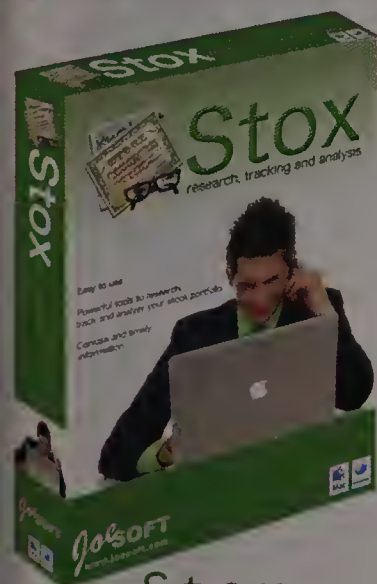
**Drive Genius 2**  
Come see the brand new version of the wildly popular Drive Genius!



**Data Backup 3**  
"Top Product" (4.5 mice) by Macworld Magazine in January 2007.

**JoeSOFT**  
www.JoeSoft.com

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engineering, inc.  
www.prosoftengineering.com



**Stox**  
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"Got an iPod®? Use iTunes®?"  
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# ACCESSORIES

Not every great iPod accessory extends your music player's capabilities into bold new realms. Some merely complete the sentence "My iPod's great, but I wish . . ."

## iPod Shuffle Accessory

Few people would dispute that the second-generation shuffle's supersmall design is vastly better than the previous version. But there's one exception. While the original shuffle could plug directly (and conveniently) into a USB port, the current model requires a small docking cradle that connects to your computer via a long



**INCIPIO-BUD**

cable—it's functional enough for desktop use, but it's not a great option when you're on the road. That's what makes **Incipio's IncipioBud** (★★★★½; [macworld.com/3199](http://macworld.com/3199)) so valuable. One end is a USB plug; the other is a mini-plug with the same data and power connections as Apple's dock cradle. Plug it into your shuffle's headphone jack, and your music player can hook up with any USB port. \$6; Incipio, [www.myincipio.com](http://www.myincipio.com)

## iPod Accessory

**SendStation's Dock Extender** delivers a substantially better iPod experience in a tiny package. Like the IncipioBud, it's little more than an adapter—with a dock-connector plug on one end and a dock-connector port on the other. But if you want to use a dock-cradle accessory without removing your iPod from a protective case, the Dock Extender is all you need. \$29; SendStation, [www.sendstation.com](http://www.sendstation.com)

# CASES

Cases and other protective gear for iPods might seem like interchangeable commodities. But a couple stood out this year.

## Case for the 3G iPod Nano

Our favorite case for the third-generation iPod nano is **SwitchEasy's Biscuit** (★★★★½; [macworld.com/3200](http://macworld.com/3200)). Priced lower than most cases, it's a slim design made from two pieces of Lexan polycarbonate plastic that completely sheathe the nano. (Included protectors cover the Click Wheel and dock connector port.) It also includes a Universal dock adapter, an adapter for third-party headphones, and a lanyard.

\$20 to \$22; SwitchEasy, [www.switcheasy.com](http://www.switcheasy.com)

**BISCUIT**



## Case for the 2G iPod Nano

If you've still got a second-generation nano, **iSkin's Duo** (★★★★½; [macworld.com/2663](http://macworld.com/2663)) combines the best features of a silicone skin and a hard case. A silicone sheath covers the nano, and a plastic faceplate snaps onto the outside for added protection without compromising the nano's sleek profile. A number of useful accessories are also included: a Universal dock adapter, a dust cover for the nano's bottom opening, a lanyard, and a swiveling belt clip.

\$30; iSkin, [www.iskin.com](http://www.iskin.com)

Macworld senior editor **Dan Frakes**, Macworld.com executive editor **Philip Michaels**, and Macworld associate editor and MacUser.com coeditor **Dan Moren** contributed to this story.



## Special Play: Evolve

With the **Evolve**, Griffin Technology has taken a unique approach to solving the dilemma of how to get music from its source to remote locations: each speaker is a rechargeable stand-alone unit. When placed on the main base, a speaker recharges and pairs with the base; you can then move it up to 100 feet away, where it will play for up to ten hours. Although the Evolve's sound quality isn't the best you'll find, its convenience just might be.

\$300; Griffin Technology, [www.griffintech.com](http://www.griffintech.com)

## IPHONE ACCESSORIES continued

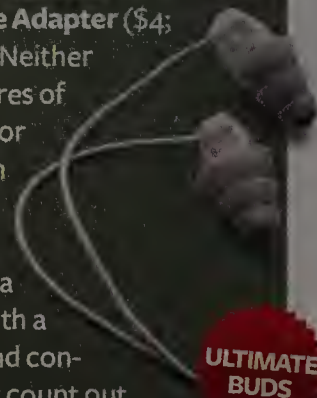
background noise; and excellent sound quality, good range, and lightweight comfort round out the package. It's also cheaper than many other earpieces.

One Apple design choice that continues to irk iPhone users is the recessed headphone jack, which restricts which third-party headphones you can use with the handset. **Ultimate Buds** ([www.ultimatebuds.com](http://www.ultimatebuds.com)) offers a solution: it grafts a cable cannibalized from the iPhone's own earbuds onto a set of high-quality in-ear-canal headphones. For \$150,

you get the benefits of a built-in microphone and a squeezable controller along with the superior sound of either Etymotic Research's ER-6i (★★★★; \$149; [macworld.com/2138](http://macworld.com/2138)) or Future Sonics and Xtreme Mac's FS1 (\$150; [www.xtrememac.com](http://www.xtrememac.com)). And if neither of those models fits your needs, Ultimate Buds will do surgery on your favorite pair of headphones for \$40.

If you don't feel like subjecting your headphones to an invasive procedure, you can pick up an inexpensive headphone adapter that lets you use your own headphones with the iPhone. We recommend **RadTech's ProCable** (\$8; [macworld.com/3205](http://macworld.com/3205)), available in both 3- and 4-inch lengths, and Helium Digital's very affordable **Headphone Adapter** (\$4; [macworld.com/3206](http://macworld.com/3206)). Neither offers the phone features of Apple's own earbuds; for that, you'll have to turn to **Shure's Music Phone Adapter** (\$40; [macworld.com/3207](http://macworld.com/3207)), a slightly longer cable with a built-in microphone and control button. (And don't count out V-Moda's Vibe Duo, mentioned in the headphones section.)

you get the benefits of a built-in microphone and a squeezable controller along with the superior sound of either Etymotic Research's ER-6i (★★★★; \$149; [macworld.com/2138](http://macworld.com/2138)) or Future Sonics and Xtreme Mac's FS1 (\$150; [www.xtrememac.com](http://www.xtrememac.com)). And if neither of those models fits your needs, Ultimate Buds will do surgery on your favorite pair of headphones for \$40.



**ULTIMATE BUDS**

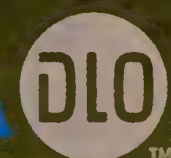


NEW IPOD CASES!  
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# Action Hero

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DIGITAL LIFESTYLE OUTFITTERS







Think Mac gaming is stagnant? These 10 games and accessories prove otherwise.

# THE GAME HALL OF FAME

BY PETER COHEN

ILLUSTRATION BY JOSHUA GORCHOV

The past 12 months won't go down as a landmark year for Mac development. The residual effects of Apple's switch to Intel-based processors continue to dampen some developers' enthusiasm for making games for the

Mac. Still, a few skilled game creators overcame the odds to produce offerings that were memorable, visually stunning, and just plain fun. So just as we honor the top products in the rest of the Mac market, it's time to make more room inside the Macworld Game Hall of

Fame, based in Pittsfield, Massachusetts, for the eight games, one software add-on, and one piece of furniture that reminded us there's plenty of Mac gaming potential just waiting to be unleashed.





## Best Reason to Brush Up on Your History

### Age of Empires III

**WHAT IT IS:** Explore and colonize the New World as adventurer Morgan Black and his family. You must populate settlements, raise legions of soldiers and fleets of ships, and battle your enemies on your way to victory.

**WHAT MAKES IT A HALL OF FAMER:** Bringing this game to the Mac was a struggle, but MacSoft persevered, replacing the physics engine with more-Mac-friendly technology. But this is no slapped-together conversion—its stunning graphics engine will pull you into the action.

\$55; MacSoft, [www.macsoftgames.com](http://www.macsoftgames.com)

## Best Way to Flex Your Sudoku Skills

### Big Bang Brain Games

**WHAT IT IS:** Freeverse's puzzle-game collection, all ensconced in a gorgeous 3-D graphics engine, tests your ability to solve problems.

**WHAT MAKES IT A HALL**

**OF FAMER:** Brain games that test your IQ, not your reflexes, have taken the Nintendo DS handheld world by storm, so it was inevitable that the Mac would get its own version. Who better to bring it to the Mac than Freeverse, the king of casual, thoughtful gaming (and monkey jokes)? Freeverse has added some fine touches like .Mac score sharing, so you can tell others how skilled (or not) you are at everything from call-and-response memory games to Sudoku. You'll also find some unique twists, such as Fallacy, a game that tests your knowledge of logical fallacies. (If you've spent any time in Internet chat rooms over the years, you're probably an expert in logical fallacies without even knowing it.)

\$30; Freeverse, [www.freeverse.com](http://www.freeverse.com)



## Best Hookup Between Your Mac and Your Game Console

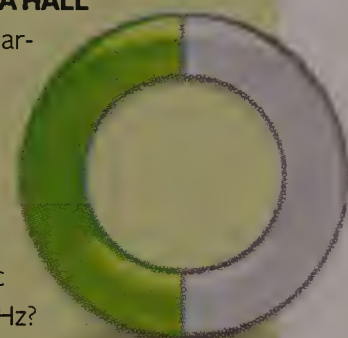
### Connect360

**WHAT IT IS:** For people who turn to consoles for their fun and games—and to Microsoft's Xbox 360 in particular—the Connect360 software makes it possible to stream all of your Mac's unprotected audio, video, and photos to the Xbox.

**WHAT MAKES IT A HALL**

**OF FAMER:** Still harboring a grudge against Microsoft for operating system shenanigans that took place back when the Mac topped out at 16MHz? Get over it—gamers looking for a rocking-good time with their home-entertainment centers certainly have. The Xbox 360 really does have a broad and entertaining library of games to choose from, and it even makes a halfway-decent media server for connecting the entertainment system and networked computers that host music and video content. Unfortunately, Microsoft makes it a plug-and-play arrangement only for Windows-based PCs. Enter Nullriver's Connect360 to bridge the gap. I use it to serve up music playlists, photo galleries of recent events, and video stored on my Mac, and it works very well—and for \$279 less than what I'd have to spend on an Apple TV to do the same thing.

\$20; Nullriver, [www.nullriver.com](http://www.nullriver.com)



## Best Reason to Break Out the Game Pad

### Lego Star Wars II

**WHAT IT IS:** It's a story from a long time ago, in a galaxy far, far away—only with Lego-based characters replacing the Wookiees, droids, and Jawas.

**WHAT MAKES IT A HALL OF FAMER:** Some corners dismissed the original Lego Star Wars as too kid oriented. No one's dismissing the sequel, which has solidly established this Lego-based franchise as a real boon to the *Star Wars* gaming universe. Re-creating the events from the original movie trilogy, Lego Star Wars offers a lot of authentic *Star Wars* gaming, and even involves a certain amount of Lego-brick building (and bashing) fun. And Feral has been careful to provide good game-pad support, so if you're looking for a Mac game that offers a great console-style experience, this is the title for you.

\$40; Feral Interactive, [www.feralinteractive.com](http://www.feralinteractive.com)



## Best Throwback to Junior High School SketchFighter 4000 Alpha

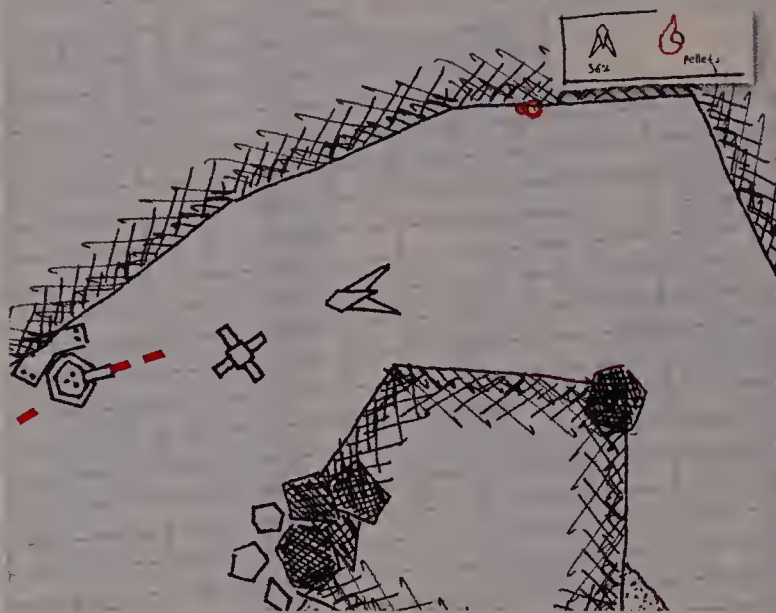
**WHAT IT IS:** Harken back to those idle school days, when you spent spare moments in class scribbling drawings in your notebook. That's the inspiration for SketchFighter 4000 Alpha, a shoot-'em-up game that uses that hand-drawn look for some crazy, crazy fun.

### WHAT MAKES IT A

**HALL OF FAMER:** The charmingly unsophisticated graphics might fool you into thinking there's

not much to this game other than blasting your way past other spaceships. But it also offers phenomenally fun cooperative and competitive multiplayer gaming with a built-in game finder and the ability to share your scores with other players online. And if the whole pen-and-paper look isn't do-it-yourself enough, SketchFighter even includes a level editor that lets you create your own missions. At \$19, this game is a steal—download it now and relive the good old days of middle school without the threat of detention or getting stuffed into your locker.

\$19; Ambrosia Software, [www.ambrosiasw.com](http://www.ambrosiasw.com)



## Most Gratuitous Use of Acid-Spewing Alien Sphincters

### Prey

**WHAT IT IS:** Fortunately the *only* game to feature acid-spewing alien sphincters, this first-person shooter puts you in the shoes of Tommy, a disenfranchised young Cherokee, who's trying to rescue his girlfriend and grandfather from a bio-mechanical alien spacecraft.

### WHAT MAKES IT A HALL OF FAMER:

Prey looks great and plays beautifully. It also incorporates some really unusual game play, thanks to a prolific use of dimensional vortexes that will spit you onto the walls and ceilings of the rooms you've just left. Jumping from one part of a room to another, walking on walls, and otherwise thumbing your nose at gravity can be disorienting—but this game is unlike any other you've seen on the Mac. For mature gamers—and Prey is *not* intended for the whole family—this is an adventure worth taking.

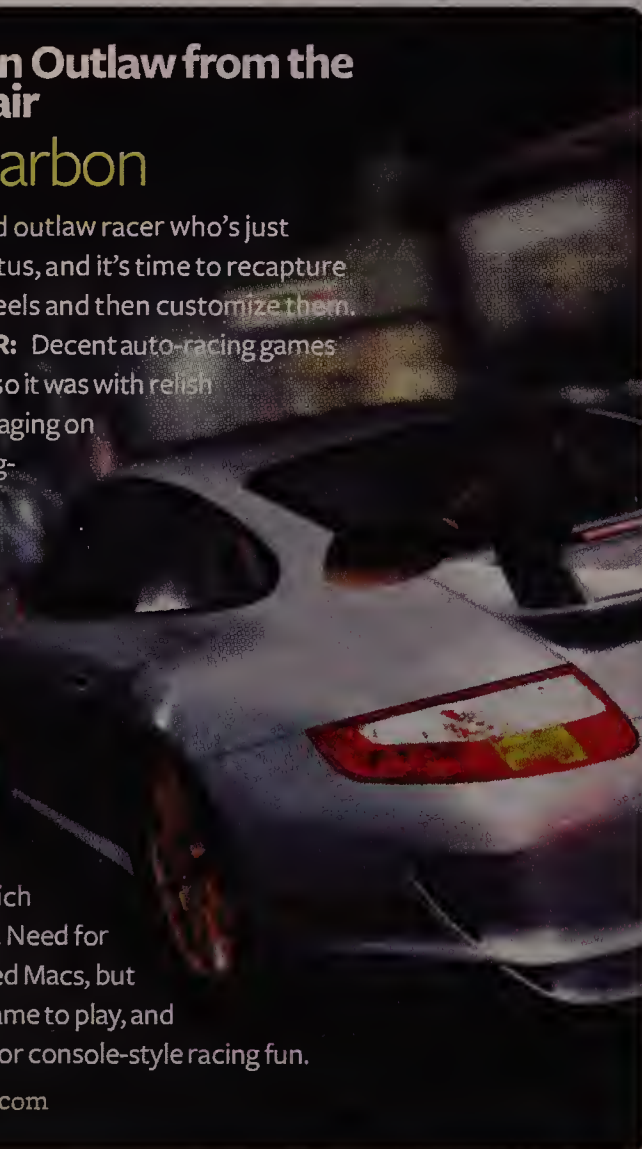
\$40; Aspyr Media, [www.aspyr.com](http://www.aspyr.com)

## Best Way to Feel like an Outlaw from the Safety of Your Armchair Need for Speed Carbon

**WHAT IT IS:** You're an underground outlaw racer who's just returned to town after a lengthy hiatus, and it's time to recapture territory, win cash, and buy new wheels and then customize them.

**WHAT MAKES IT A HALL OF FAMER:** Decent auto-racing games are few and far between on the Mac, so it was with relish and gusto that we tore open the packaging on Need for Speed Carbon, part of a long-running game series from Electronic Arts (EA) that has only now found its place on the Mac. It's one of the first half-dozen titles EA has released on the Mac independently—up to now, the company had been content to let other partners, such as Aspyr, publish Mac versions of its games. Need for Speed has never been on that Mac-compatible list, which makes this release even more special. Need for Speed Carbon runs only on Intel-based Macs, but don't hold that against it—it's a fun game to play, and worth checking out if you're looking for console-style racing fun.

\$40; Electronic Arts, [www.eagames.com](http://www.eagames.com)



## WHY CIDER RULED IN 2007

TransGaming Technologies has been making noise about its Cider technology since 2006, but 2007 was the year in which the developer really put its translation-layer technology into action. Cider makes it possible for a Windows game to run on the Mac, without requiring installation of a copy of Windows—bringing Mac games to market faster than ever before. Go to [macworld.com/3260](http://macworld.com/3260) for more on what Cider delivered in 2007 and what to expect in the coming year.



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## Best Reason to Get a Second Job to Pay for Your Gaming Jones

### World of Warcraft: The Burning Crusade

**WHAT IT IS:** The expansion pack to World of Warcraft adds two new playable races, an entire new continent to explore, and other enhancements to the massively multiplayer online game.

**WHY IT'S A HALL OF FAMER:** World of Warcraft isn't an easy habit to shake—different playable races in the game and different character classes give you a lot of options to explore. And the Burning Crusade expansion pack adds even more options than before, making that burning sensation to play—and pay World of Warcraft's monthly service fee—stronger than ever.

\$30; Blizzard Entertainment, [www.worldofwarcraft.com](http://www.worldofwarcraft.com)

## Best Way to Emulate Minnesota Fats

### The Sims Pool

**WHAT IT IS:** Head on down to the local billiards parlor and take on your fellow Sims, one would-be hustler at a time—using nothing more than your fifth-generation iPod's Click Wheel.

**WHAT MAKES IT A HALL OF FAMER:**

The iPod isn't an ideal gaming platform—the device's size can work against it, and its tiny screen can cause eyestrain. Still, some developers have managed to make the most of the iPod's capabilities—The Sims Pool is easily the best example of that. As in other Sim-based games, the better your Sim does on the felt, the better your Sim feels. And the pool part of the action (Eight Ball and Nine Ball) is a lot of fun.

\$5; EA Mobile via the iTunes Store, [macworld.com/3039](http://macworld.com/3039)



## Best Floor's-Eye View of Your Games

### TreyChair

**WHAT IT IS:** With the TreyChair, gamers finally have a seat that eschews some of the sillier touches in favor of more practical features.

**WHAT MAKES IT A HALL OF FAMER:** I've sat on my share of game chairs over the years, and most have been variations on the same theme—chairs with embedded speakers or lights or some other gadget you have to plug in. The end result was usually cables getting tangled in the legs and bound up in the casters of rolling chairs. The makers of the TreyChair took a different direction. The chair looks good enough to place in an office cube. You can take off the top and set it on the floor, rocker style, using the base as a tray table. The tray's also handy for keeping a bowl of chips and a can of soda at the ready if you're just a spectator.


\$239 to \$299; TreyChair, [www.treychair.com](http://www.treychair.com)

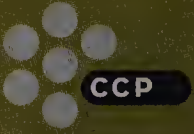
## THE YEAR AHEAD

Dwelling on 2007 is so yesterday—Mac gamers want to know what they can expect the rest of this year.

**EPIC GAMES** The makers of the Unreal game engine have promised that both Unreal Tournament III and Gears of War are Mac bound. What Epic hasn't said is who will publish the games on the Mac. However, if you're well versed in Mac game history, you'll know that MacSoft has published Mac versions of Epic's offerings before.



**ASPYR**  Neverwinter Nights 2 will give fans of the role-playing game something to cheer about. Aspyr isn't sticking all its eggs in one basket—the holiday season should also bring forth Guitar Hero III for Mac and Quake Wars: Enemy Territory.

**MULTIPLAYER** **MADNESS** CCP  shipped Eve Online in November—too late for Game Hall of Fame honors, alas. In the first few months of 2008, expect the massively multiplayer online game (MMOG) set in outer space to get an overhaul with Trinity, a new expansion pack.

MMOG news on the Mac doesn't end there, either. Blizzard Entertainment is planning another World of Warcraft expansion pack. And perhaps more important, Blizzard is preparing to resurrect its most beloved real-time strategy-game franchise, StarCraft, with StarCraft II.

**OTHER NEWS OF NOTE** Free-verse is sharpening its skills with the Geometry Wars-style abstract shooter Neon Tango, and has other tricks up its sleeve for the year. Play-First, the evil genius behind the popular Diner Dash series, is promising to continue its line of fun casual games. And Ambrosia Software has fun lined up for Mac gamers, too.

Senior News Editor **Peter Cohen** reports on and reviews all the latest games in Macworld's Game Room at Macworld.com.





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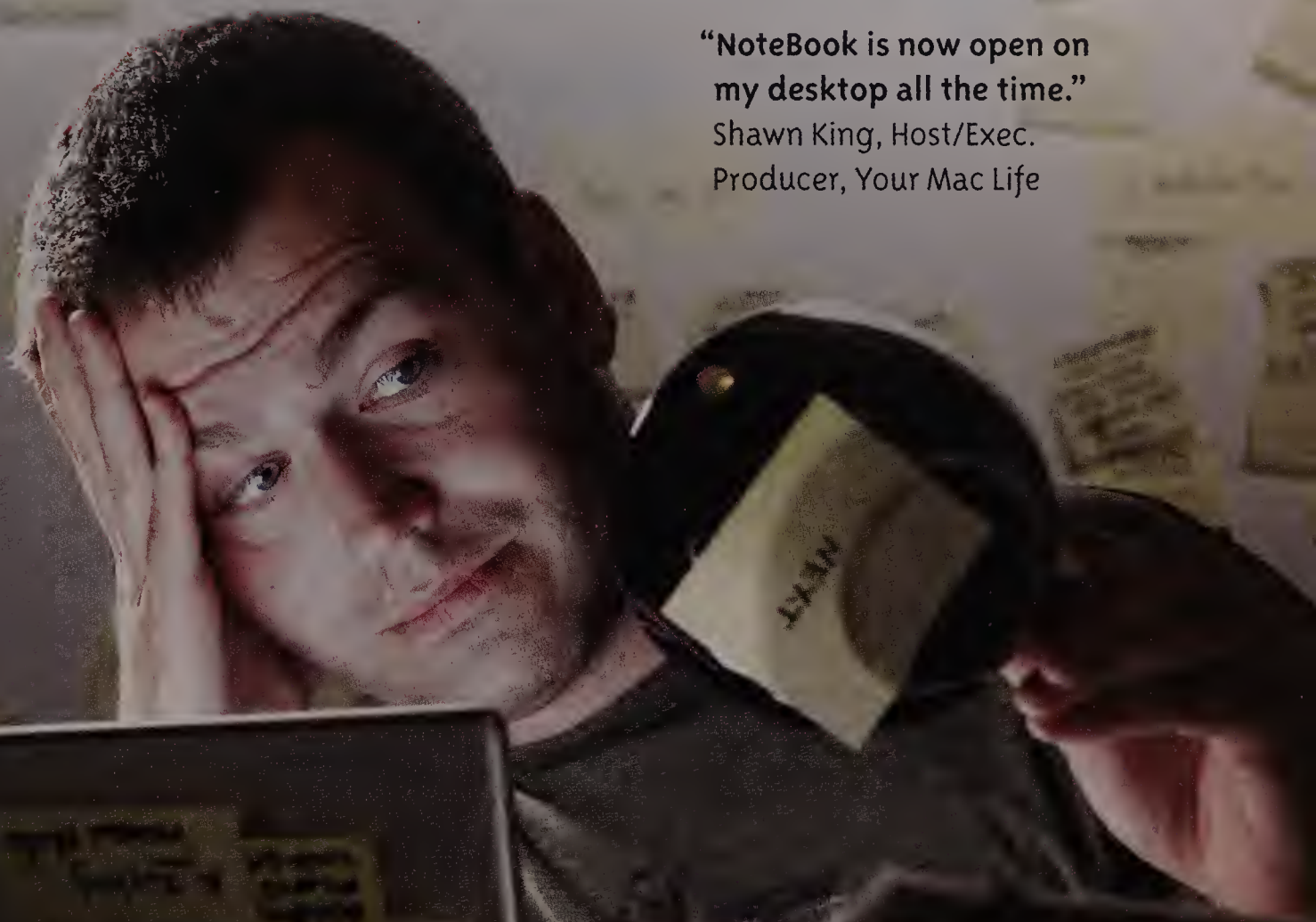
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Tera Patricks, Mac360.com

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Shawn King, Host/Exec.

Producer, Your Mac Life



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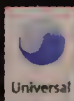
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# Fix Mac Slowdowns

Tips that'll put some zip back in your Mac **BY JOE KISSELL**

**D**oes your Mac seem to be getting slower over time? This probably isn't your imagination. As you use your computer, a number of factors can gradually lead to poorer performance. Things slow down as your CPU becomes busier with more tasks, your RAM fills up with open programs and documents, and your hard drive runs out of free space. In addition, individual programs, such as your Web browser and your e-mail client, occasionally need some tweaks to maintain peak performance. Luckily, it's easy to solve most slowdowns and restore much of your Mac's original pep.

### Web Browsing Is Too Slow

When Web pages take a long time to load, or when your browser becomes generally sluggish, you may suspect that your Internet connection is too slow. That's possible, but if you have a reliable broadband connection, the problem is more likely something you can easily solve. Try these tips.

**Quit and Relaunch** Web browsers tend to be resource hogs, and if you visit lots of media-rich sites, this effect can increase over time. Quit and relaunch your browser occasionally (at least once a day) to speed up browsing and reduce your browser's impact on other programs.

**Close Tabs and Windows** Do you keep lots of tabs or windows open? Each one uses RAM, and some of them can also bog down your processor, even when you're not actively viewing that page. If your browser's performance is poor, try limiting yourself to six or eight open Web sites at a time.



**Try a Different Browser** There's no easy answer to the question "Which browser is fastest?" It depends on your Mac's processor, which version of OS X you're running, and which version of a given browser you're using. *What* you're doing—for example, playing a Flash game or looking at a CSS-rich site—matters, too. My advice is to consider trying a different browser if yours feels too slow. You may get the best results from Apple's Safari 3 ([www.apple.com/safari](http://www.apple.com/safari)), Mozilla's Firefox 2 ([www.getfirefox.com](http://www.getfirefox.com)), The Omni Group's OmniWeb ([www.omnigroup.com](http://www.omnigroup.com)), or Opera Software's Opera ([www.opera.com](http://www.opera.com)), depending on the circumstances.

### E-mail Takes Forever

Does checking your e-mail or searching for a saved message seem to take

an eternity? Several strategies can help solve this problem.

**Clean Out Your Inbox** If you have thousands of messages in your inbox, your e-mail client can get bogged down. Apple's Mail (/Applications) is especially sensitive to inbox size when you're using IMAP, a common mail protocol that keeps copies of your messages on the server. Filing messages you've already read reduces the amount of work your e-mail client must do every time you check your mail.

**Rebuild Your Message Index** Both Mail and Microsoft Entourage (part of the \$399 Microsoft Office 2004; [macworld.com/1541](http://macworld.com/1541)) store indexes of saved messages in special databases. This facilitates displaying, sorting, and searching your messages. Over time, though, these databases can become cluttered or even corrupted, resulting in slower overall performance, among other problems. You may be able to speed up your e-mail client significantly by rebuilding the message index every few months.

Mail's Rebuild command (Mailbox: Rebuild) works only on individual mailboxes. To rebuild all your mailboxes in all accounts at once, try one of two utilities: Matteo Discardi's Speedmail (donation requested; [macworld.com/3154](http://macworld.com/3154)) and Leland Scott's VacuumMail (free; [macworld.com/3155](http://macworld.com/3155)). The latter can run on a schedule.

To rebuild your database in Entourage, hold down the option key while launching the program. In the

FIND IT  
ONLINE

For more ways to fix slowdowns, see [macworld.com/](http://macworld.com/)

**3153**





## TRY THIS

### Keep Your iWeb Site in Sync

Want to update your iWeb site from multiple Macs or multiple user accounts on the same Mac? If you have a .Mac account, you can keep Apple's iWeb '08 (part of the \$79 iLife '08 suite; [macworld.com/3084](http://www.apple.com/macworld.com/3084)) in sync between multiple machines and users by placing your site resources on your iDisk.

First, open your .Mac preference pane, click on the iDisk tab, and make sure that iDisk syncing is turned on. Then, on the Mac you used to create your site, open your user folder and go to /Library/Application Support/iWeb/Domain.sites2. This file contains all of iWeb's assets (if you have extensions hidden, the file will show up as Domain). Copy the iWeb folder from Application Support onto your iDisk (I recommend using the Documents folder). Return to the Application Support folder and move the iWeb folder to someplace else on your local hard drive so iWeb won't see it. To make changes to your iWeb site, open your iDisk and double-click on the Domain.sites2 file. After you've done this once on a Mac or user account, iWeb will know to use this file in the future.

There are a few caveats to keep in mind: If you chose to sync your iDisk manually, you'll need to sync your .Mac account each time you make changes to your site. You should also make sure that you're not logged in to your iDisk account from multiple locations at the same time, as that can create problems with saving new changes. Finally, I recommend making daily backups of the Domain file, since working with files directly from your iDisk can cause them to become corrupted. —JASON CRANFORD TEAGUE



Database Utility window that appears, select an identity (if you have more than one). Select Rebuild Database and click on Continue (see "Speed Up Entourage"). Click on Done and then on Quit when the process is finished (it can take a while). After you relaunch Entourage, it will have to redownload any previously retrieved messages from your IMAP account(s).

**Check on Progress** Your e-mail client may be simultaneously sending and receiving messages from multiple accounts, synchronizing mailboxes, and performing other background tasks—or it may just be stuck. If you can find out exactly what it's up to at any given time, you'll be able to solve potential problems.

In Mail, choose Window: Activity Viewer. The small floating window that appears lists each task Mail is performing. If one task appears to be taking an inordinately long time, click on the Stop icon next to it to cancel that task. In Entourage, choose Window: Progress. Again, a window lists each current task; click on Stop to stop a single task, or on Stop All to stop all interaction with your mail servers. If you experience persistent misbehavior in Entourage, choose Window: Error Log to display a list of error messages, which may give you clues that help you diagnose the problem.

**Consolidate Accounts** Do you have more than a couple of e-mail accounts? Though most e-mail clients can check as many accounts as you have, each additional account means a longer wait

when you check for new messages. One way to speed things up without getting rid of any e-mail addresses is to redirect all your incoming messages to a single account. For example, if you use Apple's .Mac mail (\$100 per year; [www.mac.com](http://www.mac.com)) and Google's Gmail (free; [www.gmail.com](http://www.gmail.com)) for secondary e-mail accounts, you can set up both to

forward incoming mail to your ISP, and thus get all your mail at one account—cutting the amount of checking that has to happen by two-thirds. (You may find this particularly valuable if you have a slow or unreliable Internet connection.)

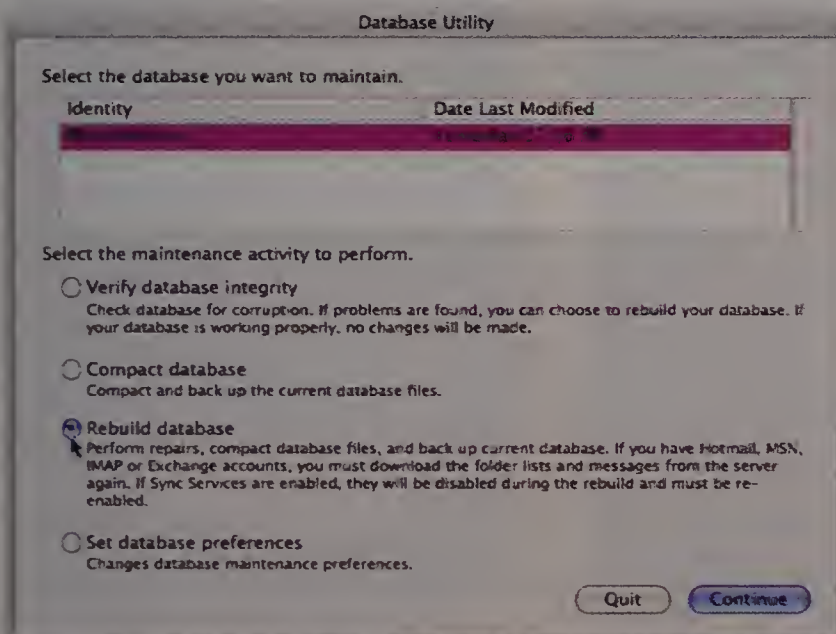
Each e-mail provider has a different mechanism for setting up forwarding. If you're

a .Mac subscriber, log in to your account, click on the Mail link, and then click on the Preferences link. In the Other tab, select Forward My Email To and fill in the address that messages should be sent to; then click on Save. If you have a Gmail account, log in at [www.gmail.com](http://www.gmail.com), click on the Settings link, and then click on the Forwarding And POP/IMAP link. Select Forward A Copy Of Incoming Mail To, enter the address, and click on Save Changes.

#### Everything Is Too Slow

If everything you do on your Mac seems to take much longer than it once did, look for several common system problems, as well as individual programs that are outdated or are simply using more than their fair share of your Mac's resources.

**Run Fewer Programs** Take a look at your Dock, and notice how many programs are currently running. (In OS X 10.4, you can tell what's running by looking for a black arrow below program icons; OS X 10.5 uses a glowing blue orb.) Each one of these programs, even if it has no open windows, is consuming a



**Speed Up Entourage** Use Entourage's hidden Database Utility to repair your index of e-mail messages and, in the process, fix performance problems.



certain amount of your Mac's RAM and processor power. You can reduce the strain on your system by quitting the ones you're not actively using.

**Restart Your Mac** If you normally leave your Mac running all the time, performance can deteriorate. One reason for this is a relatively common kind of bug known as a memory leak: a program keeps asking the system for ever greater amounts of RAM. Another reason is that the longer you use your Mac in a given session, the likelier you are to launch additional programs (including invisible background processes) that use up system resources. The easiest way to clear all your memory and zap hidden programs is to restart.

**Add More RAM** The more RAM your machine has, the more programs and documents you can have open at the same time without relying heavily on *virtual memory*. (To use RAM as efficiently as possible and let many programs run at once, OS X's virtual-memory system temporarily stores data on your hard disk instead of in RAM.) As a result, adding RAM—up to a certain point—is one of the most effective ways to speed up your Mac. The amount you install will depend on the capacity of your machine and your budget, but I recommend 2GB to 4GB for most people.

**Update Your Software** The software on your computer—including OS X

itself—may have bugs that diminish overall performance. So I recommend keeping up with software updates. Choose Apple Menu: Software Update to check for the latest versions of OS X and other Apple software. For third-party applications, look for a Check For Updates menu command or consult the developer's Web site. Microsoft Office, for example, comes with a utility, Microsoft AutoUpdate (/Applications), that checks for and downloads Office updates. Another useful tool is Georg C. Kaindl's free Dashboard widget App Update ([macworld.com/3175](http://macworld.com/3175)). It checks all your programs against the latest available versions recorded at sites such as VersionTracker.com and MacUpdate.com. It then lists the ones for which newer versions are available.

**Repair Your Disk** The sorts of random minor errors that can crop up on any hard disk over time may slow down your computer. To check for such errors and repair them, start your Mac from your OS X Install disc. (To do so, hold down the C key while starting up with the disc installed.) Then choose Utilities: Disk Utility, select the startup disk from the list on the left, and click on Repair Disk in the First Aid tab. Alternatively, use a third-party utility such as Alsoft's \$100 DiskWarrior 4 (★★★★; [macworld.com/2503](http://macworld.com/2503)) or Micromat's \$98 TechTool Pro 4 (★★★★; [macworld.com/0755](http://macworld.com/0755)). Start up from the program's emergency disc to run the repair software. Or if you have a bootable duplicate of your disk on an external hard drive, you can start up from that and run Apple's Disk Utility or another tool.

**Defragment Your Disk** As you use your computer, individual files get split into numerous pieces on your hard disk, a state known as *file fragmentation*. In addition, the files or file fragments may be scattered all over your disk, reducing the amount of contiguous free space; this is known as *disk fragmentation*. Ordinarily, neither condition is problematic, given today's large, fast hard drives—so for most people, defragmenting a drive has little (if any) benefit. However, fragmentation can become a real problem when your disk is nearly full or when you're running lots of programs that depend heavily on virtual memory. Your

## What's My Mac Doing?

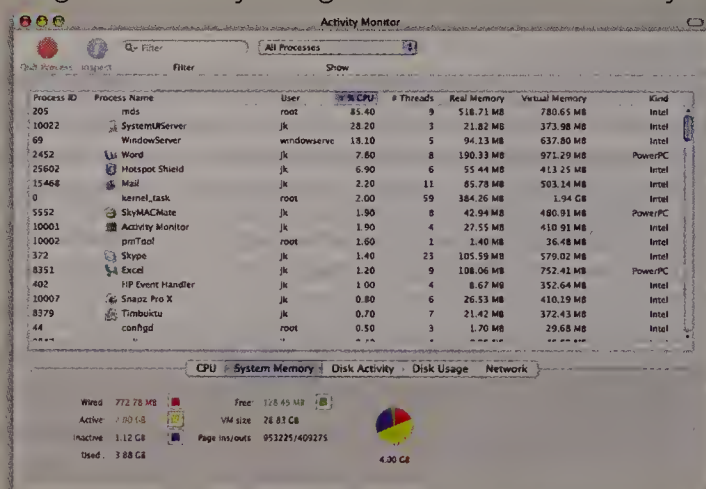
If your Mac slows down or the spinning beach-ball cursor appears while you're working, you may assume that your computer is busy doing something—but what? If you find out exactly what's using up your CPU cycles and RAM, you'll be much closer to solving your speed problems. Luckily, you can use free utilities to uncover this information.

My favorite tool for monitoring overall Mac performance is Raging Menace's Menu-Meters (donation requested; [macworld.com/3158](http://macworld.com/3158)). After you install this preference pane, one or more customizable meters will appear in your menu bar, showing CPU activity (for as many processors or cores as your machine has), RAM usage, disk access, and network access at a glance.

If you see that CPU or RAM usage is high, open Activity Monitor (in /Applications/Utilities) to get more detail (see "Root Out Hidden Programs"). Choose My Processes from the pop-up menu at the top of the window. (This is typically safer than digging through All Processes, which can include things important to the OS.) Then click on a column heading—such as %CPU (CPU in OS X 10.5), Real Memory (RSIZE in OS X 10.5), or Virtual Memory—to sort the list of running processes by that criterion.

If you see a program that's using a lot of system resources but isn't actively in use, try quitting it. If it refuses to close (or if it doesn't appear in the Dock at all), select it in Activity Monitor, click on Quit Process, and then click on Quit. (If it still fails to quit, repeat the procedure, clicking on Force Quit instead.) Note that some things, such as backup software, run periodically in the background and may use significant resources when they do—but unless they get stuck for a long time, there's no need to force-quit them.

Use the tabs at the bottom of the Activity Monitor window to get information on other resource usage—CPU, System Memory, Disk Activity, Disk Usage, and Network. For more about using Activity Monitor, see "Monitor Misbehaving Macs" at [macworld.com/3157](http://macworld.com/3157).



**Root Out Hidden Programs** Activity Monitor can show you every process—hidden or not—that's running on your Mac and potentially gobbling up resources.



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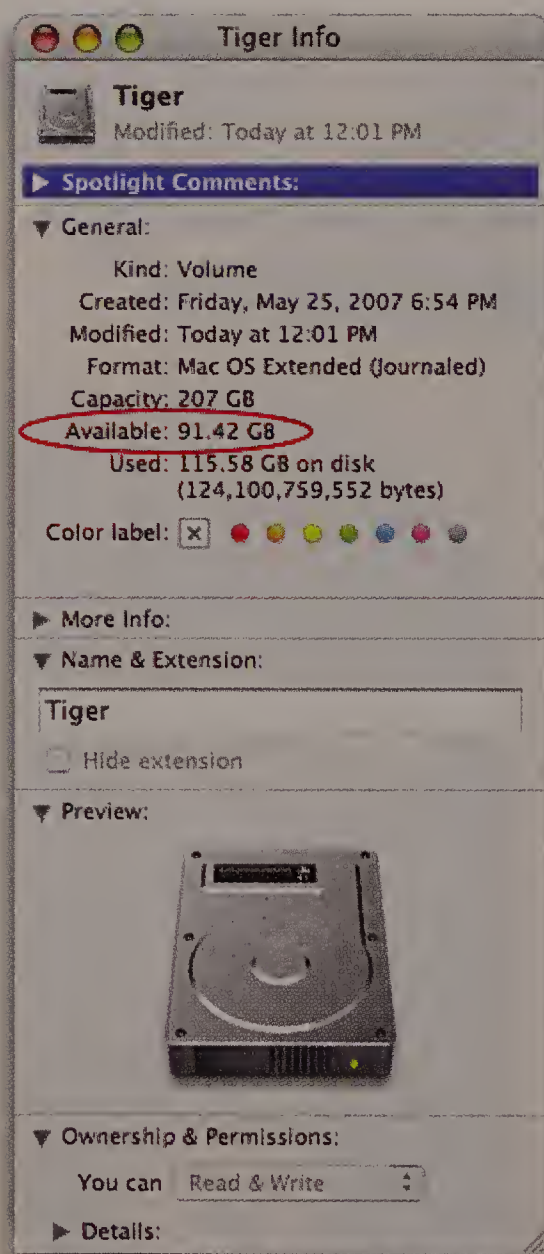
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drive must do extra work to reconstruct all the pieces of every file it uses. Fragmentation can also be a problem with audio or video programs that must transfer very large chunks of data to or from your disk in real time, and that therefore function much better when there's enough free space to store those files in contiguous units.

OS X automatically defragments smaller files, but larger ones may still be in many pieces. And merely rejoining individual files into contiguous segments doesn't address the problem of disk fragmentation. Therefore, if you think your Mac is spending far too long reading and writing files on disk, you may benefit from defragmenting (or "optimizing") your hard disk on occasion—say, once or twice a year.



**A Full Disk Is a Slow Disk** The Get Info window tells you how much empty space your hard disk has. To get the best performance from OS X, you should have at least 10GB of free space.

Several utilities can do this for you, including TechTool Pro, Coriolis Systems' \$35 iDefrag 1.6.4 ([www.coriolis-systems.com](http://www.coriolis-systems.com)), and Prosoft's \$99 Drive Genius 1.5.3 (★★★★; [macworld.com/0525](http://macworld.com/0525)). Note that you should always have a recent, full backup of your drive before defragmenting. The process can take many hours, depending on the size of your drive and its level of fragmentation.

Another way to obtain a (mostly) defragmented disk is to duplicate it

## All the add-ons and system enhancements you've installed can make an impact on your Mac's performance.

onto another disk, using a program such as Shirt Pocket's \$27 SuperDuper 2.1.2 (★★★★; [macworld.com/2325](http://macworld.com/2325)) or Mike Bombich's Carbon Copy Cloner 3.0.1 (★★★★½; see page 68). Use Disk Utility to erase the original disk, and then reverse the duplication procedure, copying all the files from your backup to your main disk. This process is generally faster and less expensive than running a defragmentation utility, but it does require that you have an extra hard disk or partition available.

**Check Disk Space** If your hard disk is within a few gigabytes of being full, you risk running out of space for virtual memory, and you increase the probability of significant disk fragmentation. You can check your disk's free space by launching Apple's Activity Monitor (/Applications/Utilities) and clicking on the Disk Usage tab. Alternatively, select your hard-disk icon in the Finder, choose File: Get Info, and look at the Available amount under the General heading (see "A Full Disk Is a Slow Disk").

If your disk is too full, delete seldom-used files or programs (after backing them up, of course). One way to look for such items is to choose File: Find in the Finder, select Computer, and then use the pop-up menus to set a Last Opened Before date that's a year or more in the past. Your goal should be to have at least 10GB of free space. (If you're perpetually close to your drive's capacity, you should consider upgrading to a larger drive.)

**Look for Hidden Programs** Along with the programs that appear in your

Dock, numerous components of OS X (as well as third-party programs) run without your launching them—either continuously or as needed. This is normal and good, but problems can arise if too many background processes are running, especially if they have memory leaks or other bugs.

Use Activity Monitor to find out what's running. Don't worry if it lists numerous items you don't recognize, but pay attention to programs that have

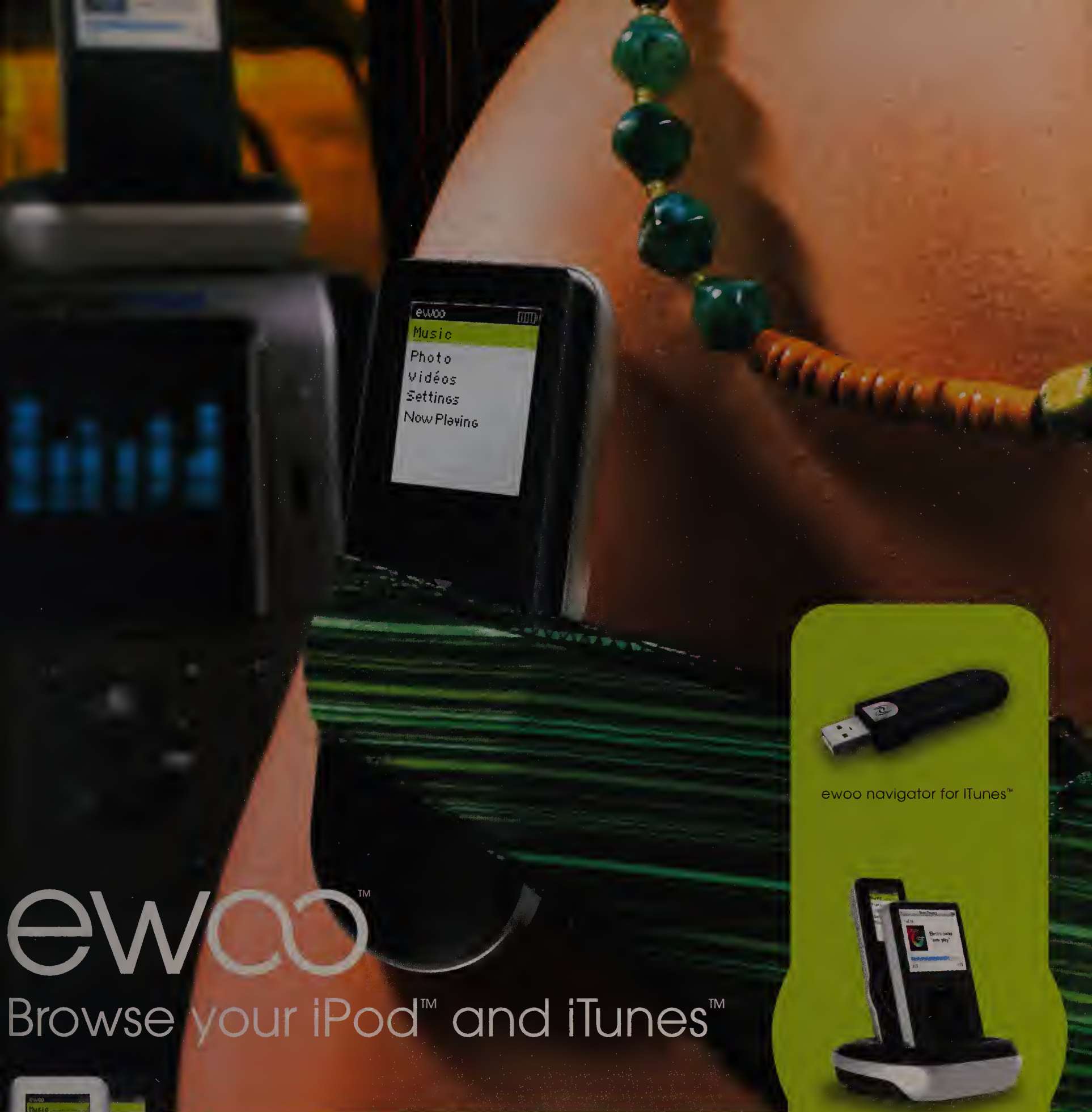
high %CPU and Real Memory figures (CPU and RSIZE, respectively, in OS X 10.5). If you don't need them, it's possible to use Activity Monitor to quit them (see "What's My Mac Doing?").

If you're using an Intel-based Mac, you may have performance problems with programs that weren't written for your computer's processor. Check Activity Monitor's Kind column to see whether a process is running natively (Intel) or using Rosetta emulation (PowerPC). (If the column isn't visible, choose View: Columns; Kind to display it.) PowerPC applications running on an Intel processor require extra CPU power; check with the developers to see if a Universal update is available.

**Check for Unwanted Widgets and Login Items** Finally, remember that all the add-ons and system enhancements you've installed—Dashboard widgets, menu extras, preference panes, and the like—come at a cost. Each one uses a certain amount of RAM and CPU power and can make an impact on your Mac's performance. And be sure to check the list of Login Items in the Accounts preference pane. If you see items in this list that you no longer use, select them and click on the minus-sign (–) button to remove them. Then either restart, or log out and log back in. ☒

**Joe Kissell** is the senior editor of TidBits and the author of the e-book *Take Control of Troubleshooting Your Mac* (TidBits Publishing, 2007; [www.takecontrolbooks.com](http://www.takecontrolbooks.com)).



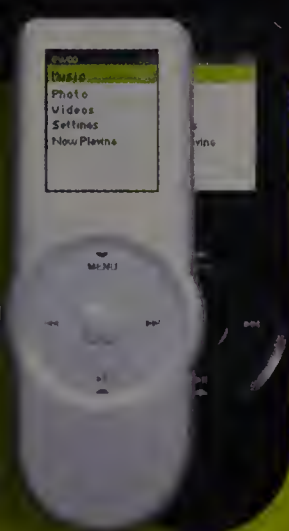


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# Digitize Your Cassettes and LPs

How to bring your analog audio to your Mac **BY MATHEW HONAN**

**W**hile it's fantastic to be able to instantly download an album from iTunes or Amazon.com to your iPod, many classic recordings will never make the jump to a digital store. If your music collection stretches back several decades, odds are you have at least a few beloved analog titles on cassette or vinyl. They need not languish unloved and unheard simply because they're in an old format. With just a few steps, very little money, and a reasonable amount of time, you can bring those classic recordings into the digital era.

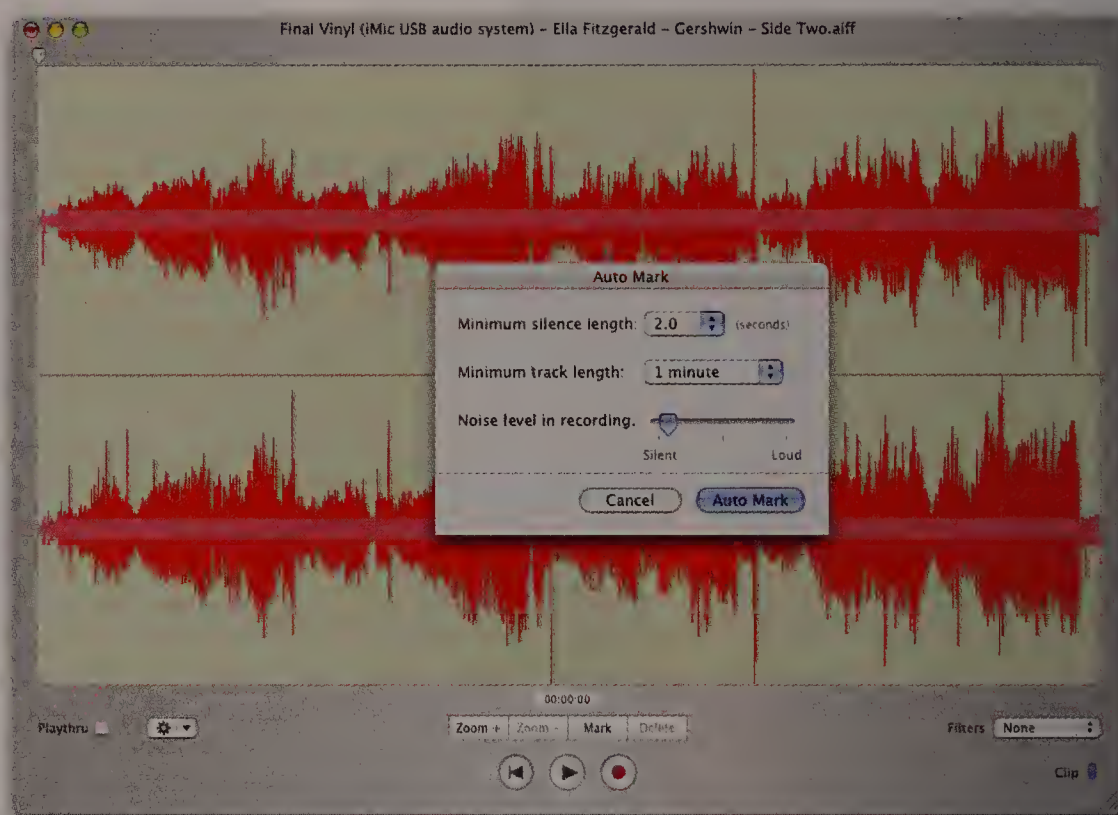
## Getting Started

The first thing you'll want to do is make sure you have all the right equipment. At a minimum you'll need the means to play back your media—a cassette deck, a turntable, or both—plus the right cables to import everything, enough hard-drive space to store your audio, and, of course, a computer to capture and digitize the audio. Aside from the computer, you'll find inexpensive options for all of these.

If your Mac has a microphone input and you are importing from a cassette deck or an amplified phonograph, you're almost set. All you need is a Y-cable, with red and white analog component-audio connections (often called RCA) at one end and a 1/8-inch stereo (or minijack) connection at the other. You should be able to get one of these at your local electronics store for less than \$5.

## **Want more tips on digital music?**

For iPod- and iTunes-related expert advice and breaking news, as well as reviews of all the latest gadgets, check out Playlistmag.com.



**Final Vinyl** Make sure that the noise level is high enough for Final Vinyl to detect gaps between tracks when auto marking.

At the opposite end of the spectrum, if all you have is a stack of old records, and no way to even play them, much less import them, you may want to consider a turntable with a USB connection. Ion Audio's \$99 Ion TTUSB05 turntable ([www.ion-audio.com](http://www.ion-audio.com)) is a good choice. A USB turntable will automatically adjust the RIAA curve (see "The RIAA Curve" for more details) and amplification levels for you, and makes importing audio a snap.

However, most people will likely fall somewhere in between in terms of equipment. Perhaps you have an unamplified turntable that's been gathering dust for decades. In that case you're going to need something called a phono preamp, a device that boosts output levels for line-level recording and corrects the signal (you may already have such a device if your turntable is connected to a

digital AV receiver). You can typically find these phono preamps on eBay and the like starting at about \$25. Or perhaps your Mac doesn't have a microphone or line input at all—a problem for both cassette and LP importing on some older Macs. In that case, you're going to need a USB audio input, such as Griffin Technology's \$40 iMic ([www.griffintechology.com](http://www.griffintechology.com)), which will also act as a preamp. If you have neither of these capabilities, ART's \$129 USB Phono Plus v2 preamp (discontinued, but available from Sweetwater.com and other resellers), amplifies the signal (and corrects the RIAA curve) while providing a USB connection.

Next you're going to want to make sure your computer is set up correctly to import audio. Go to System Preferences and click on the Sound icon. Under the Input tab, select the correct





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sound input for your setup. If you have a 1/8-inch cable running directly from a cassette deck or an amplified turntable, select Audio Line-In Port. If you are using a USB connection—such as Griffin's iMic, a USB turntable, or a USB preamp—select USB.

If you're using the USB port, you must take one more step as well. Launch the Audio MIDI Setup application found in your Utilities folder. Make sure that the default input selected is the same USB audio selection you chose in System Preferences and that the format is set to 44100.0 Hz and 2ch-16bit.

Finally, you'll need to think about disk space. Even if you intend to archive everything to CD or DVD (see "Future-Proof Formats"), you're going to require a fair amount of disk space to capture the audio and edit it before you save it off. A general rule of thumb is that CD-quality audio will eat up about 10MB of space per minute. If you intend to listen to everything on your iPod or a stereo connected to your iTunes library, you may want to invest in an external hard drive to store all that primo sound.

## Recording

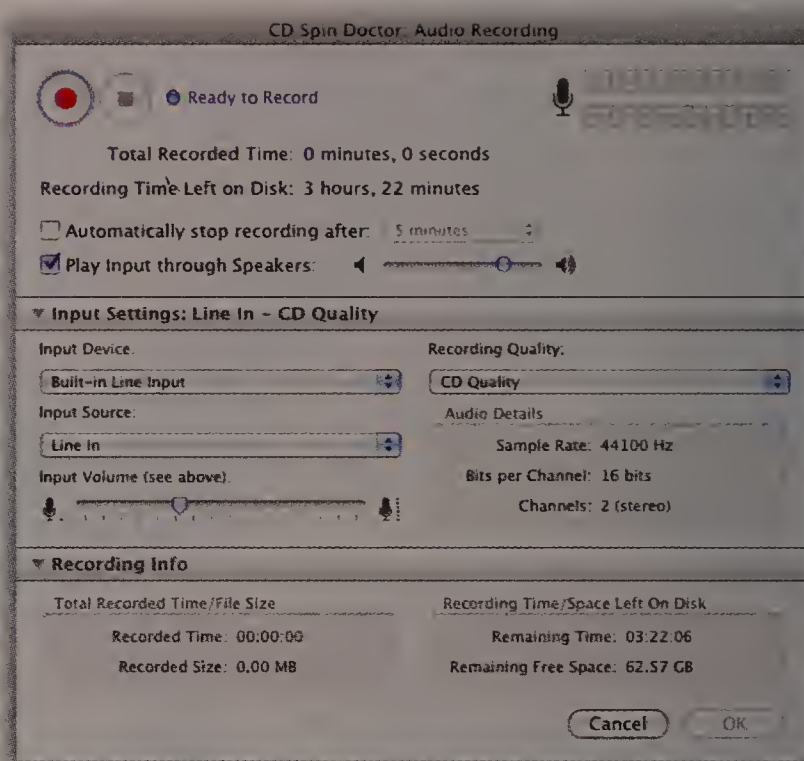
Once you've set up your hardware, your next task is going to be making sure you have the right software. You have plenty of applications to choose from for importing and capturing audio. I recommend two good, low-cost options: Roxio's CD Spin Doctor (\$40; [www.roxio.com](http://www.roxio.com)), which is also bundled with the company's Toast Titanium; and Griffin's

Final Vinyl, a free application that comes with the iMic. Don't worry if you're already using another application, such as Apple's GarageBand; it should work in basically the same way.

### CD Spin Doctor

This is my favorite program for digitizing audio from an old analog source. Before you actually start recording, you'll want to adjust your levels.

Launch the program, select New Recording, and click on Continue. In the next window, click on Advanced (if you haven't previously switched to Advanced mode) and then click on OK. Under Input Settings, make sure the correct recording input device is selected and Recording Quality is set to CD Quality. Now start playing your record or cassette and adjust the Input Volume slider so that the audio volume indicator at the top of the CD Spin Doctor window peaks toward the top end of the scale without going into the red (red levels indicate that your source is too strong and will likely make your recordings sound blown out). When you've adjusted your levels, restart the record or cassette and click on the red Record button. Let it capture



**CD Spin Doctor Settings** In Advanced mode, you can choose recording quality and other options.

all the audio from one complete side of your source (or, if you prefer, one particular track). When you have a side completed, click on the Stop button, click on either OK or Always Start In Advanced Mode, and then save your file. This is your rough master.

Now it's time to split tracks—otherwise you'll end up with one entire side as a single long audio file. Go into CD Spin Doctor's preferences, and click on the Waveform & Tracks icon. You'll see three sliders at the bottom of the resulting options screen. For LP recording, Roxio suggests setting the top slider, Sensitivity, to +0.071 or higher; cassettes should be set above +0.045. This will help the software figure out where the breaks between tracks are. You should also adjust the time sliders for track duration and silence length as needed. Enable the Auto-Define Immediately After Recording Is Complete option, and from now on CD Spin Doctor will attempt to identify tracks upon import.

Return to the main window, and click on the Auto Define button in the toolbar. Spin Doctor will then attempt to split your recording into individual tracks. You may want to fine-tune where each begins and ends by manually adjusting the edges of tracks to completely cut out the gaps between songs. You can also manually create tracks by

## The RIAA Curve

If you want to import audio directly from a turntable, you need to make sure you're cool with the RIAA. No, I'm not talking about copyright violation (it's generally considered fair use to convert vinyl you own to digital files)—rather, you need to make sure that the audio has its RIAA curve corrected. Records are made with low frequencies reduced and high ones enhanced. When they're played back through a phono amplifier (some phono amps are built into turntables or AV receivers, but typically they're not), this frequency is adjusted and corrected. In order for you to capture audio from a record, you need to make sure the signal has been RIAA-corrected first. A USB turntable will take care of this for you, as will Griffin's iMic. Otherwise, you're going to need a preamp.





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moving the slider at the top of the audio waveform to the end of a track and selecting Action: Add Track To Playhead—useful for recordings of concerts or lectures, where software can't easily distinguish tracks. If there are unwanted tracks (silence at the end of a tape, for example), discard them. When you're happy with the tracks, enter a name for each in the Track List window.

The next step is one of the many reasons CD Spin Doctor makes such a great importing option. Let's say one of your tracks has a lot of unwanted noise, such as tape hiss. Spin Doctor fixes those problems with just a few simple steps. Click on the Filters button in the toolbar. In the drawer that appears, select the Noise Reducer option at the top, and then adjust the De-Hiss slider (or either of the other sliders for clicks or crackles) while playing the track, until that hiss is history. You can also adjust the EQ settings and add some basic audio-enhancing effects here. At the bottom of the drawer, select whether you want to apply the effects to all tracks or just particular ones. Click on Apply to wrap it all up.

Finally, you're likely going to want to send your tracks to iTunes. This is easy: click on the iTunes button in the toolbar, enter the artist and album name, and

choose a format—AAC, MP3, or Apple Lossless. Apple Lossless will give you AIFF-quality results but at a smaller (though not tiny) file size. Check the Apply Filters To Tracks box if you didn't do so earlier, and click on OK.

**Final Vinyl** Using Final Vinyl is somewhat easier, but it isn't as powerful as Roxio's software. If you're importing from a cassette, all you need to do is click on Record and start playback. If you are importing from a record player, launch the program, select Add from the Filters drop-down menu, and pick the EQ option. On the next screen, make sure the Connected To Turntable option is selected. In Final Vinyl's Preferences menu, select Automatic Levels.

To begin capturing audio, click on the red Record icon and press play on your cassette deck or drop the needle on the record. If you want to listen to your audio as it plays back, make sure to select the Playthru option. Play an entire side of your album or cassette while the software records, and then click on Record again. Final Vinyl takes a few minutes to process your audio and build a waveform; you can then play back the recording and, if you're happy with it, split it up into tracks.

To divide it into tracks, select Auto Mark from the drop-down menu on the

left side of the main window. Now you need to adjust the bottom Noise Level In Recording slider so that it can mark your audio where one track ends and the next begins. You should be able to tell where the gaps between songs are by looking at the waveform. Make sure that the auto-marking noise level band that now runs down the center line of the waveform is wider than the audio signal in these gaps. If need be, adjust the time limits to compensate for any short tracks.

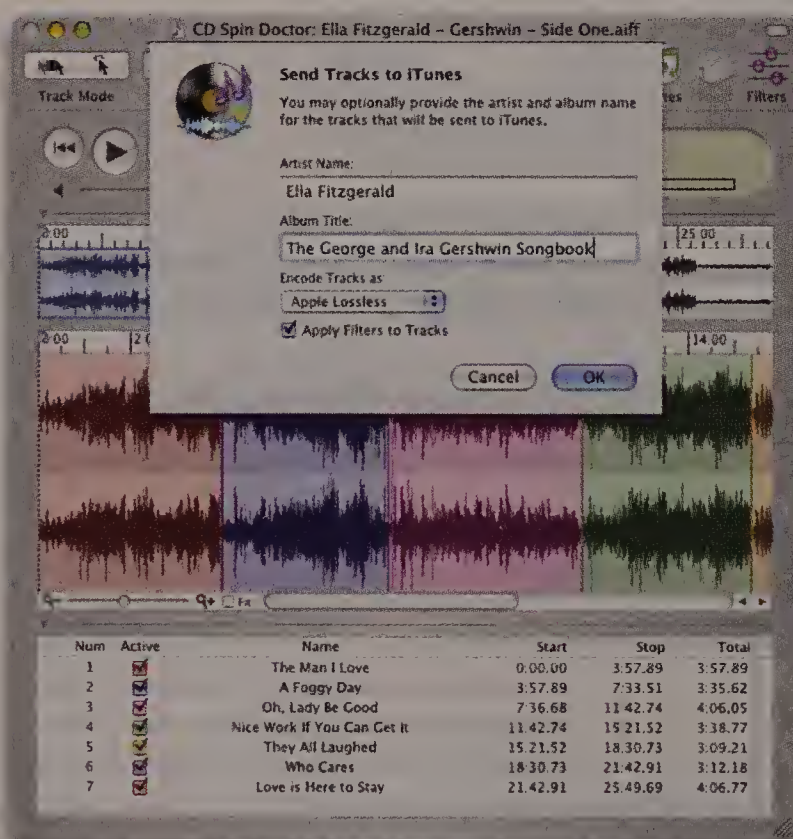
## Future-Proof Formats

A friend in New Hampshire recently asked me how to record LPs directly to CD. My answer was "don't." By recording directly to a CD, you may find yourself retracing your steps later, ripping the same tracks again and importing them to a digital library to play in a portable device. Although you very well may want to burn everything to CD so you can listen to it in the car or keep a backup, you should consider importing your tracks into your iTunes library first.

However, just as you don't want to go right to full-quality CDs, nor do you want to simply save everything as MP3s. The best solution is to save your master AIFF files on an external drive, or to archive them on a DVD or other high-capacity disc, and to also save individual tracks to iTunes. While MP3 or AAC is dandy, Apple Lossless will give you better quality without sacrificing too much disc space. Better yet, since it's a lossless format, unlike MP3 or AAC, you can always expand it later and get the exact quality of the original AIFF recording.

Now click on the Auto Mark button, and Final Vinyl will attempt to mark tracks for you. You may have to delete some marks or add others, but once it has identified each track, it's time to save your tracks as individual files. Move the playhead to each song, one at a time, and select Save Audio Region As from the File menu (unfortunately, there's no batch export function). Give your track a name and choose a destination, and Final Vinyl will save it as an AIFF file, ready to go to iTunes, where you can burn it to CD or convert it to an MP3, AAC, or Apple Lossless file and then transfer it to an iPod. ☒

**Mathew Honan** is a contributing editor at *Wired* magazine and an avid record collector.



**CD Spin Doctor** CD Spin Doctor can export your tracks to iTunes as MP3, AAC, or Apple Lossless files.



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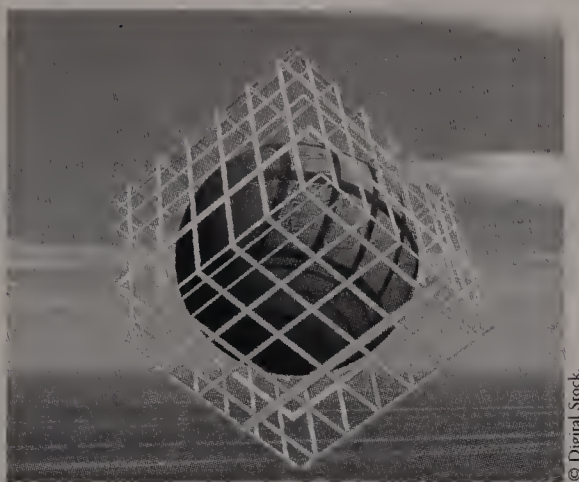
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# The Portable Hotspot

Get everyone online from anywhere with a cellular router **BY GLENN FLEISHMAN**

If you travel with colleagues for business trips, or if your multiple-Mac family brings its laptops on vacation, getting Internet access for everyone can be an exercise in configuration frustration.

You could hunt down Wi-Fi hotspots. But they're usually tied to a specific location, they can be pricey for a group, and they can be security nightmares.

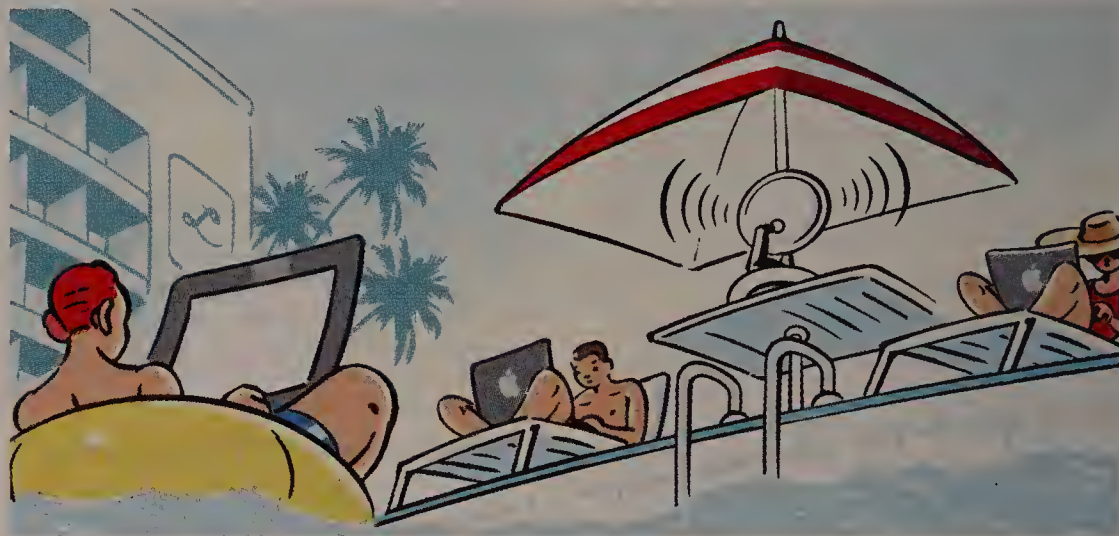
You could also get cellular data access (see [macworld.com/3208](http://macworld.com/3208)). But such access requires connecting one Mac, either with a special adapter or via a data-ready cell phone, and then sharing that access with the rest, which can be both slow and a pain to set up.

There is an alternative: a *cellular router*. This portable device is designed to make a cellular data connection, and then to share that connection among a group of computers. To make this setup work, you need three things: a data account on a cellular network, a cellular router, and an adapter that will connect the two.

## Cellular Data Service

For high-speed data, Sprint Nextel's and Verizon Wireless's networks both adhere to the EVDO (Evolution Data-Only) standard; more specifically, both companies are using EVDO Rev. A, a faster upgrade of the earlier EVDO Rev. 0. AT&T uses HSPA (High-Speed Packet Access). Both technologies offer download speeds in the range of several hundred Kbps downstream, with burst rates of 2 Mbps or more. T-Mobile offers only EDGE (Enhanced Data rates for Global Evolution) service, which runs at about 100 to 200 Kbps downstream. (The iPhone uses AT&T's EDGE network.)

Both Sprint and Verizon offer EVDO nationally, while AT&T's HSPA service



is available only in parts of the United States. But none of these providers offer these high-speed services coast-to-coast; the highest speeds are limited to bigger cities. Where those services aren't available, you can usually still connect to some slower form of service as long as you're within range of a cell.

AT&T, Sprint, and Verizon all charge \$60 per month for unmetered access to their highest-speed networks, although that requires a two-year contract and may require a voice plan. (*Unmetered* means that you don't pay by the byte, but the company might cut you off if you exceed a certain level of usage.) T-Mobile offers unlimited EDGE for \$20 per month with a voice plan.

Because AT&T's network still isn't truly nationwide, your best choices for shared mobile access are Sprint and Verizon. Of the two, Verizon has consistently stated that shared use of its cell network, or use of it as a fixed broadband replacement, violates the terms of service. That leaves Sprint as the default choice for mobile sharing.

## Cellular Adapters

Whichever carrier you choose, it'll offer to sell you a compatible adapter

card at the same time. If you'd rather buy an EVDO adapter on your own, get one that handles EVDO Rev. A. In real-world use, an EVDO Rev. A-speed network may not always be available; when that happens, Rev. A adapters can drop down to the slower EVDO Rev. 0 standard and even to the modem-speed RTT (Radio Transmission Technology), which is usually available wherever there's a voice signal of any kind. If you're using an HSPA network, those cards typically also support the slower UMTS (Universal Mobile Telecommunications Service) and EDGE standards; some can also connect to the modem-speed GPRS (General Packet Radio Service).

Cellular routers require PC Card adapters; Express/34 cards will work in your MacBook Pro but not yet in these routers. PC Cards typically cost as little as nothing to \$100 with a two-year contract and rebates, and \$50 to \$300 without those options.

Whichever card you choose, it has to be activated before you can use it. Depending on the card and operator, this may require a PC laptop. While two major card makers, Novatel Wireless ([www.novatelwireless.com](http://www.novatelwireless.com)) and



Sierra Wireless ([www.sierrawireless.com](http://www.sierrawireless.com)), offer connection software for Mac OS X, it's up to the carrier selling the card to provide activation software. Verizon Wireless offers Mac OS X-supported cards and software; the other carriers don't. A reseller may be willing to activate the card before shipping it to you.

## Cellular Routers

Next, you need to choose a cellular router. Sprint resells equipment from Junxon, Kyocera, and Linksys; AT&T resells Junxon gear as well. For the purposes of this story, I tested the Junxon Box JB-110b (\$699; [www.junxon.com](http://www.junxon.com)), the Kyocera KR1 Mobile Router (\$199; [www.kyocera-wireless.com](http://www.kyocera-wireless.com)), and the Linksys WRT54G3G Wireless-G Router (\$250; [www.linksys.com](http://www.linksys.com)).

All three have been on the market for a year or more and are generally friendly with OS X. All three have a PC Card slot into which you insert your cellular adapter. The Junxon and Linksys boxes can work with either EVDO or HSPA networks. The Kyocera and Linksys units have four Ethernet jacks and built-in 802.11g wireless networking; the Junxon has two Ethernet jacks and 802.11b. (At press time, the company had upgraded its hardware to 802.11g.) The metal Junxon Box appears to be the most rugged; the Linksys and Kyocera are made out of perfectly fine plastic, but it's hard to know how well they would fare after a few road trips.

## Cellular Routers Compared

Router	PRICE	PROS	CONS
<b>Junxon Box JB-110b</b> <sup>A</sup>	\$699 <sup>B</sup>	Central management tools; supports most adapter cards; rugged metal box	High price
<b>Kyocera KR1 Mobile Router</b>	\$199	Best wizard for Web-based configuration	EVDO only
<b>Linksys WRT54G3G Wireless-G Router</b>	\$250	Full-featured Wi-Fi gateway and router	Wizard software is Windows only

<sup>A</sup> 802.11g version shipped in late 2007. <sup>B</sup> \$599 without Wi-Fi.



**Wireless Routers** From left, the Junxon Box JB-110b, the Kyocera KR1 Mobile Router, and the Linksys WRT54G3G Wireless-G Router.

The Junxon and Kyocera boxes primarily specialize in cellular routing; the Linksys unit is more like a full-featured Wi-Fi gateway with cell-routing capabilities grafted on. (For further comparison, see the table, "Cellular Routers Compared," below.) And note that Kyocera announced a more advanced version of the KR1—the KR2, appropriately enough—for 2008, which will include 802.11n for local wireless networking, as well as ExpressCard support. (Pricing is not yet set.)

### Setting Up Your Mobile Network

After you insert an activated PC Card adapter and power up the router, each router sets up a default Wi-Fi network and a default cell connection if possible. You can change all of these starting settings, and you can configure all three devices via a Web browser.

Kyocera's router is the simplest to set up, as it includes a Web-based wizard that asks the right questions and makes suggestions at several points that improve the router's security.

Junxon offers a cleanly designed set of configuration screens. Because it's designed to be managed by IT professionals, some of those screens require a degree of technical sophistication. And because it's designed for management from a central location

(hence its higher price), the Junxon box can (with the right PC Card) report back to that central administrator its current location using GPS satellite coordinates.

Anyone who has used Linksys gear before will recognize the overabundance of tabs and options in its router's interface. Nonetheless, if you ignore the clutter, you can set basic features, such as network name, Wi-Fi channel, and security options, quite simply.

Each of these routers offers some assistance for optimizing location by providing signal-strength indicators for the cell network, either on the front panel or in a Web interface. As you might expect, the devices will pick up the strongest signal indoors near those windows with the clearest line of sight, and outdoors in areas free of obstructions.

Whichever router you choose and wherever you choose to use it, once you've set it up, everyone in your traveling party should be able to see and select it in their AirPort menu—and hence get online pretty much anywhere there's a cellular signal. 📶

**Glenn Fleishman** is the author of *Take Control of Your 802.11n AirPort Extreme Network* (TidBits Publishing, 2007; [www.takecontrolbooks.com](http://www.takecontrolbooks.com)).



# Automator Power: Variables and Looping

How to use the coolest new features in OS X's scripting tool **BY BEN WALDIE**

**T**he latest version of Automator (in OS X 10.5 Leopard) has several handy new features.

Among the most useful: variables and looping. Unfortunately, unless you're an experienced scripter, they're also potentially the most confusing.

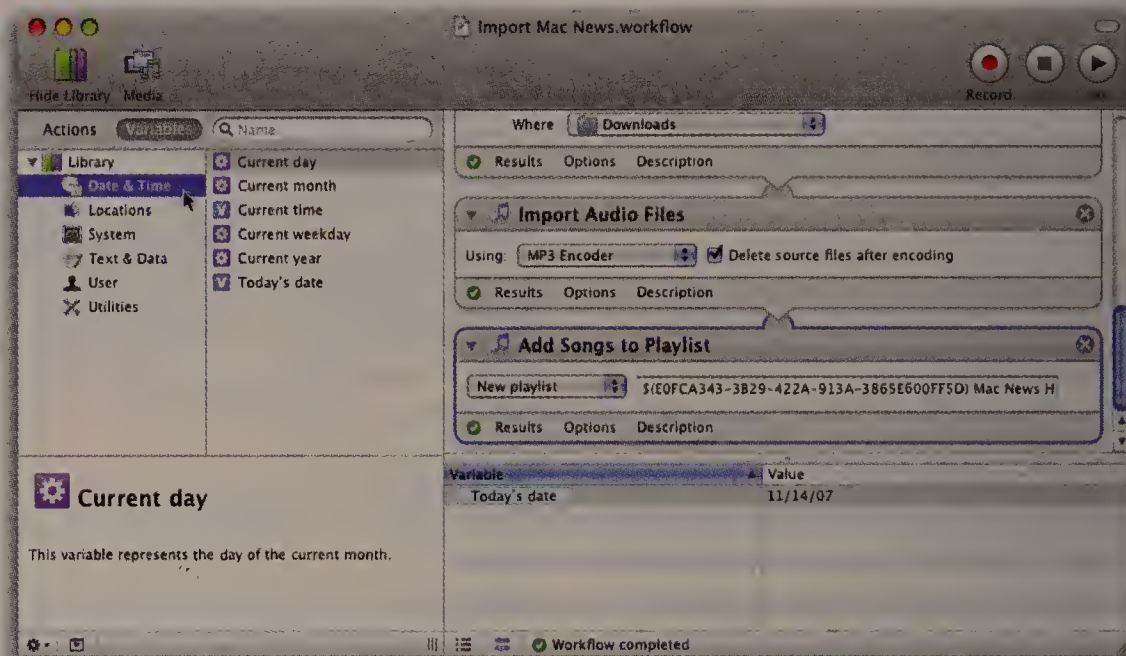
Until now, Automator workflows have been linear: each action passed information to the next in sequence. With variables, workflows can be much more dynamic: you can define the output of one action as a variable, and store it for later use by another action. Automator also includes dozens of built-in variables, such as dates, times, and system information. With looping, you can repeat actions or groups of actions a set number of times.

To illustrate how Automator's variables and loops work, I've created two sample workflows. While I'd like to think these workflows are interesting enough in themselves, the main point here is to show how you can employ these two new features in workflows of your own.

To build them for yourself, launch Automator (in /Applications), create a new custom workflow, then add the actions as indicated. Actions are identified by category, then name; click on the specified category on the left side of the Actions pane, find the action on the right, and drag it into the workflow pane. You can also download actions from [macworld.com/3259](http://macworld.com/3259).

## Listen to the Daily Mac News

Automator's built-in variables are probably the easiest to use. This workflow uses them (along with Leopard's new



**Built-In Variables** Automator has its own set of predefined variables, including dates and times, for use in your workflows.

RSS feed actions) to locate online news articles, convert their text to dated audio files, and add those files to a dated playlist in iTunes so you can listen to them every day.

**1. Internet: Get Specified URLs** By default, this action is configured with the URL [www.apple.com](http://www.apple.com). Double-click on Apple in the Bookmark column, and change it to the name of the news source you're using. Press tab and enter the source's URL (be sure to include **http://**). In this example, I'll use **Macworld** and **http://www.macworld.com**, but you can of course use any news source you like.

**2. Internet: Get Feeds From URLs** This action gets any RSS feeds from the Web address or addresses you provided above.

**3. Internet: Get Text From Articles** In this step, Automator grabs the text of the site's RSS feeds. If you want to focus on certain topics, you can insert

an Internet: Filter Articles action right after this one.

**4. Text: Text To Audio File** This is where you use one of Automator's new predefined variables. To differentiate between individual articles after they've been converted to audio and imported into iTunes, you can add the current date to the name of each audio file. To do so, click on Variables (a button above the Actions column). From the Date & Time category, drag the Today's Date variable into the Save As field of the Text To Audio File action. After that variable, type **Mac News**. Then choose Downloads from the Where pop-up menu. When the workflow runs, Automator will insert the current date in front of each audio file's name. When you're done, click on the Actions button just above the Library list to go back to the Actions list.

**5. Music: Import Audio Files** In this action, you can specify an encoder if you wish. Select the Delete Source Files After Encoding option; otherwise, the audio







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files will remain in your Downloads folder after being imported into iTunes.

**6. Music: Add Songs To Playlist** One of the nice things about Automator's new variables is that once you've defined one, you can use it repeatedly throughout a workflow. (A list of the variables in the workflow should appear after you insert one; if it doesn't, select View: Variables.) That makes it easy, for example, to create a new playlist just for today's news.

Once you drag this action to the workflow, select New Playlist from the menu to the left of the action. Drag the Today's Date variable from the Variables list to the action's text field. Type the text **Mac News Headlines** after the variable, and you're done.

If you get an error when you try to add the Add Songs To Playlist action to your workflow, first make sure that iTunes is open and that the program has no open dialog boxes.

## Send Slide-Show Greeting

This workflow uses variables that you define yourself, as well as loops. It adds a personal touch to e-mail by using your built-in iSight camera to string together a series of snapshots as a stop-motion slide show. It then attaches your video to a new Mail message.

**1. Files & Folders: New Folder** After dragging this action to your workflow, type the name **Snapshots** in the Name

text field and leave the Where pop-up menu set to Desktop.

**2. Utilities: Set Value Of Variable** After adding this action, click on the Variables button above the Actions list. From the Locations category, drag New Path onto the action's Variable pop-up menu. Again, a list of the variables used in your workflow should appear below

**Once you've defined one of Automator's new variables, you can use it repeatedly throughout a workflow.**

your workflow. Double-click on the New Path variable that now appears in this list, and change its name to **Snapshots**.

**3. Photos: Take Video Snapshot** First click on the Actions button to reveal the actions again, and then drag this action into your workflow. Select the Take Picture Automatically option, and drag Snapshots from the variable list into the action's Where pop-up menu.

**4. Files & Folders: Rename Finder Items** Whenever you insert this action, Automator asks you whether you'd like to insert a Copy Finder Items action first, to ensure that your original files aren't renamed. This isn't necessary, so make sure to click on Don't Add. Choose Current from the Date/Time pop-up menu and Seconds From 12 M from the Format pop-up menu.

**5. Utilities: Loop** Here's where looping comes in. In this case, the Loop action will return Automator to the beginning of the workflow a specified number of times. Set the first pop-up menu to Loop Automatically. Set the next pop-up menu to Times and type 5 into the text field there. Finally, set the last pop-up menu to Use The Original Input.

**6. Utilities: Get Value Of Variable** After the loop finishes, this action will retrieve the name of the folder where you're storing these snapshots and pass it to the next action for further processing. Choose the Snapshots folder from the Variable pop-up menu. To ensure that the output of the Loop action isn't appended to this, control-click on the action's title (Get Value Of Variable) and choose Ignore Input from the contextual menu.

**7. Files & Folders: Get Folder Contents** This action grabs a list of files from the Snapshots folder, and then passes that list to the next action.

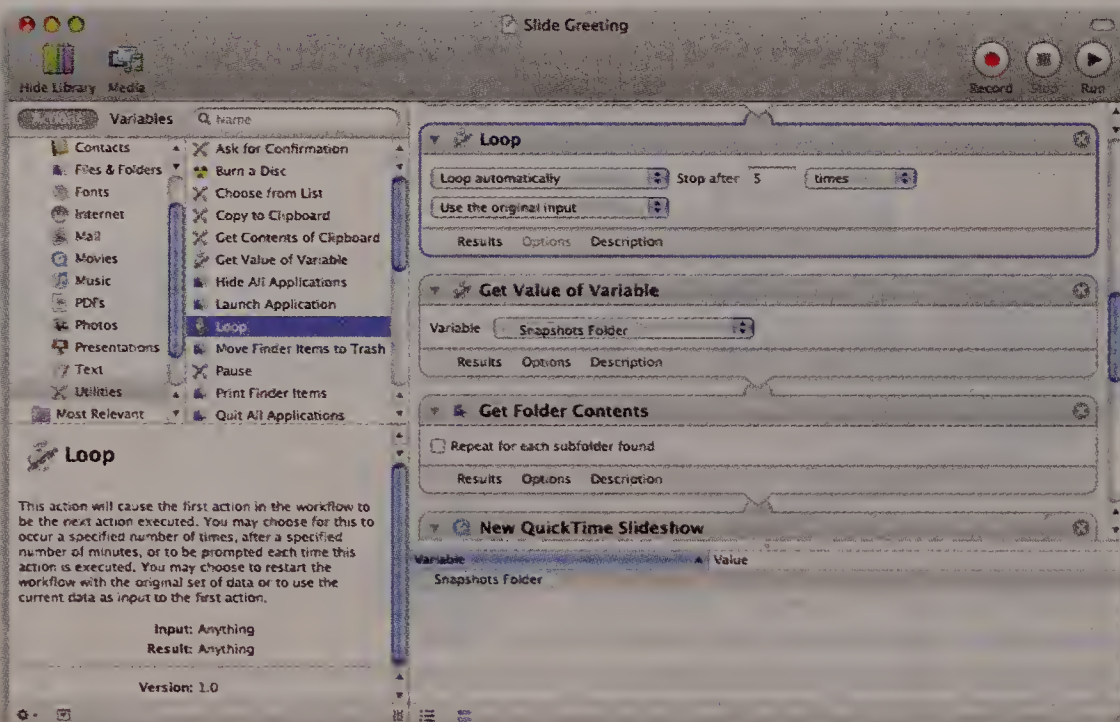
**8. Photos: New QuickTime Slideshow** Type **Slide-Show Greetings** in the Save As text field and drag the Snapshots variable into the Where pop-up menu. Next, set the slide duration to 1 second per image. Leave everything else as is.

**9. Mail: New Mail Message** Enter a greeting in the Subject field, and whatever text you want in the Message field.

That's it: when you save and then run the workflow, your iSight camera will take a series of photos, then create a new Mail message with the video attached.

More important, you should now have some inkling as to how powerful—and how simple—variables and looping can be. If you poke around some more in that Variables list and play around with looping, you'll find plenty of ways to make new, more powerful Automator workflows. ✕

**Ben Waldie** is the author of *Automator for Mac OS X 10.5 Leopard: Visual QuickStart Guide* (Peachpit Press, 2007) and the president of Automated Workflows ([www.automatedworkflows.com](http://www.automatedworkflows.com)).



**Looping Back** With the new looping action, you can tell Automator to repeat a sequence of actions as many times or for as long as you like.



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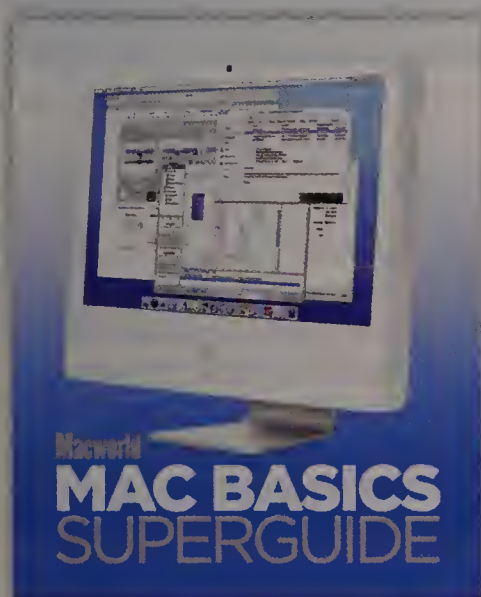


Unlock your iPhone's hidden features!

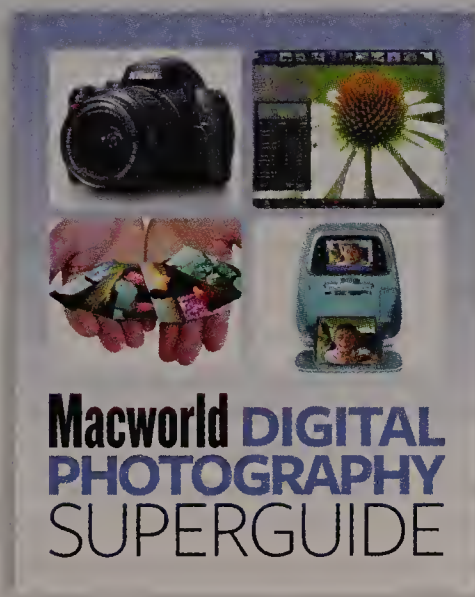
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# Help Desk

## Mac OS X Hints

The insider tips you won't get from Apple **BY ROB GRIFFITHS**

### Access Minimized and Hidden Windows

Minimizing windows to the Dock is one way to keep them out of the way yet still easily available—that is, unless you hide the program to which those windows belong (by pressing  $\text{⌘}$ -H). When you do that, the minimized windows vanish from the Dock. They're not really gone—they're just hidden like the rest of the program. But how do you get them back?

You could hold down the  $\text{⌘}$  key, press tab once to access the Application Switcher, repeatedly press tab again until you reach the program's icon, and then let go of the keys to reveal the program and all its minimized windows. But this method isn't very fast, especially since hidden programs move to the very end of the Application Switcher's queue.

Alternatively, you can click and hold on the hidden program's Dock icon. When the contextual menu appears, you'll see all of that program's windows listed at the top of the menu. In most programs, a minimized window has a gray diamond next to its name (some programs, such as Microsoft Word 2004, won't indicate which win-



**Uncover Hidden Windows** Hide ( $\text{⌘}$ -H) a program that has minimized windows, and those windows vanish from the Dock. But in both Tiger (top) and Leopard (bottom), the Full Keyboard Access option lets you select these windows. No icon will appear in the Dock, but the hidden window's name will.

dows are hidden). Select one, and it will spring open.

Another way to do this requires some setup but lets you browse all hidden windows in every program, without having to click and hold on each program's Dock icon. First, make sure that you've enabled keyboard access to the Dock. To do that, open the Keyboard & Mouse preference pane, click on the Keyboard Shortcuts tab, scroll down to the Keyboard Navigation section, and make sure that the Turn Full Keyboard Access On Or Off and the Move Focus To The Dock options are selected.

Now press control-F3. This will highlight the Finder's Dock icon. Use the right-arrow key (or the down-arrow key if your Dock is oriented vertically) to move toward the Trash. After you pass your last program icon, keep pressing the arrow key (slowly, so you don't miss

anything), and you'll see the names of your minimized windows, even though you can't see icons for those windows. Select the window you want to open, and then press return. This trick works in both OS X 10.4 and OS X 10.5 (see "Uncover Hidden Windows"). In OS X 10.5 (Leopard), the name of the hidden window appears slightly lower than the names of other items in the Dock, which makes it harder to miss.

### Cycle through All Open Windows

Many Mac veterans know that you can cycle through the open windows of your frontmost program by pressing  $\text{⌘}$ -backtick (`). Likewise, you can cycle through them in the opposite direction by adding the shift key to the mix. Things get a bit trickier, however, if you want to cycle through the open windows in *all* programs. One way to do



### Have a hint to share?

Go to [MacOSXHints.com](http://MacOSXHints.com) to submit it. This column was based on tips from Jim Engelhardt, Cédric Luthi, and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.



this is with Peter Maurer's Witch (donations requested; [www.macos.com/2956](http://www.macos.com/2956)). This utility displays a pop-up menu of open windows (minimized or not) when you press option-tab. Witch works with both Tiger and Leopard.

If you prefer a built-in solution, you can try Keyboard Navigation instead. This OS X feature lets you use just the keyboard to navigate most, though not quite all, of your Mac's interface. Its shortcuts let you access every open nonminimized window. First, though, you must enable full keyboard access by pressing control-F1. (If you're using a laptop, you may have to press fn-control-F1, depending on how you have your function keys set up.) Now you can use any shortcut listed in the Keyboard Shortcuts section of the Keyboard & Mouse preference pane. That includes control-F4 (and shift-control-F4) for cycling between open windows in all programs.

### Automatically Accept iChat Invites

Whenever someone invites you to have a conversation in Apple's iChat, a dialog box appears and lets you accept or reject the request. If you're the sociable sort who *always* accepts these invitations, though, this dialog box is nothing but a waste of time. In Tiger, you can set iChat to accept chat invitations automatically, by using Kent Sutherland's free Chax 1.5 ([www.macos.com/2605](http://www.macos.com/2605)), an iChat enhancer.

Unfortunately, Chax didn't work with Leopard at press time. But I found a surprise while clicking around in the new version of iChat. Tucked away in the program are a Run AppleScript option and a collection of AppleScripts—one of which lets you auto-

## OS X 101

# Find Your Way in the New Finder

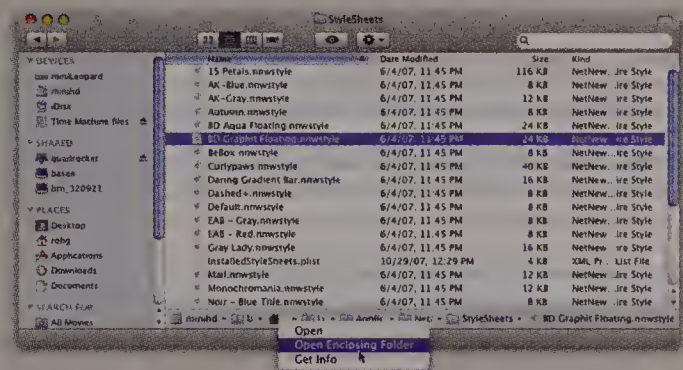
To work more efficiently in Leopard's new Finder, you'll want to learn more about a few of its most useful new functions.

**Quick Look** This amazing technology lets you look inside nearly any sort of document without having to open its parent program. Activate Quick Look by selecting something in the Finder and then pressing the spacebar. A window appears with a preview of your file. You have full Finder control in this window and can use Finder menus and keyboard shortcuts. For instance, if you decide you'd like to open a document, just press ⌘-O. To close the Quick Look window, press the spacebar again.

**Path Bar** The path bar (View: Show Path Bar) shows your location in your Mac's folder hierarchy. To see this info in previous versions of OS X, you had to either use the Path button on any Finder window's toolbar or ⌘-click on the title of the Finder window. With the new method, you can see the path at all times (see "Path-Bar Menu"). Drag and drop an object onto any folder in the path bar, and the dropped object will be moved (if it's on the same drive) or copied (if it's on another drive) to that folder.

**The Little Things** Leopard has introduced a number of other subtle features in the Finder. For instance, you can now control grid spacing—the amount of space between icons—in icon-view windows. You'll find the slider in the View: Show View Options dialog box. If you tighten spacing up a bit from the default, you can see many more icons.

If you prefer using column-view windows, View Options will now let you sort them by date, size, kind, or label. (Tiger let you sort them only by name.) It's also much easier to set your default Finder window view—column, icon, or list. Just select the view you prefer in an open Finder window, open the View: Show View Options dialog box, and click on Use As Defaults.



**Path-Bar Menu** The path bar in Leopard's Finder windows shows you exactly where you are in the folder hierarchy. Control-click on any entry in the bar to choose from several useful options.

atically accept chat invitations. Better yet, you can set up different actions for different types of invitations. For instance, you can automatically accept all text chats but keep the option of declining video chats (just in case you're online before you encounter a hairbrush some morning).

Go to iChat: Preferences and click on Alerts. Choose a type of invitation from the Event pop-up menu—for example, Text Invitation. Then select the Run AppleScript option. Finally, choose Auto Accept.applescript from the pop-up menu. (If you want to write and use your own scripts for iChat, put them in *your user folder*/Library/Scripts/iChat, and iChat will find them there.)

### Control Your Music Remotely with Leopard's iChat

If you've got more than one Mac in the house, you might be interested in another iChat AppleScript that Leopard has up its sleeve. This one lets you send commands as chat messages to another Mac running iTunes—it can be really helpful if you're using your home-office Mac and you want to change the song that your living-room Mac is cranking through your stereo, for example.

In iChat, you can type **status** to see what iTunes is currently playing on the other Mac, **next** to move to the next track in the playlist, and **previous** to move to the previous track, as well as **mute**, **unmute**, **play**, and **pause** to perform those actions. Just type a command

## WHAT'S ONLINE

### Avoid Misdirected Mail

Do you have friends or coworkers with the same first name? Here's how to avoid sending messages to the wrong person ([www.macos.com/3226](http://www.macos.com/3226)).

### Rearrange iTunes Store Downloads

Prioritize the download order of songs and movies ([www.macos.com/3227](http://www.macos.com/3227)).

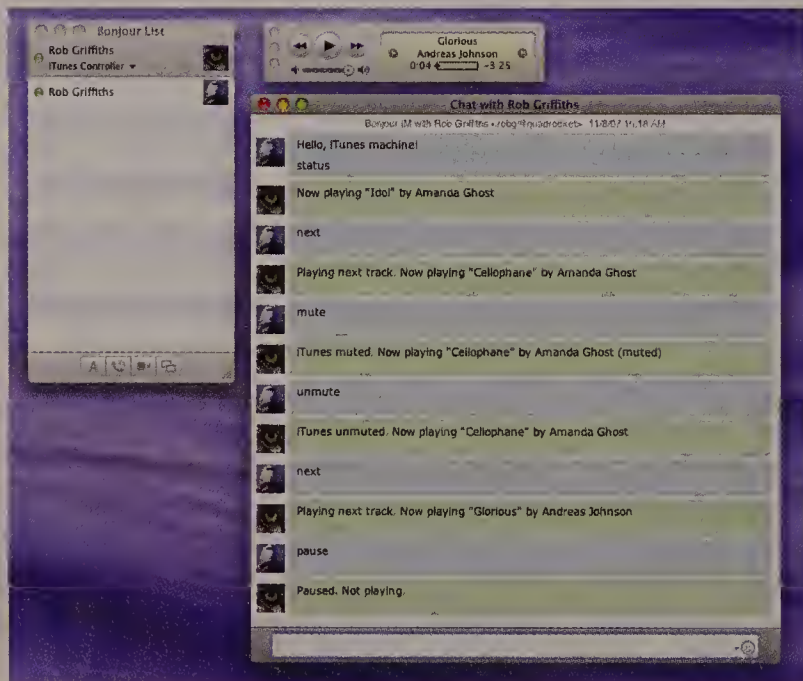




**Better Browsing Privacy** You no longer have to do away with *all* your browser's information just to get a little privacy online. Safari 3's Reset Safari command now lets you choose exactly which elements to reset.

on a line of its own and press return—the iTunes controller AppleScript on the other end will then tell iTunes what to do (see “iTunes Remote Controller”).

To set up this up, make sure that you have Bonjour chats enabled on both of your Macs. (Select iChat: Preferences, click on Accounts, select Bonjour in the Accounts list, and then choose the Use Bonjour Instant Messaging option.) On the Mac running iTunes, go to iChat: Preferences and click on Alerts. Set the Event pop-up menu to Message Received. Select the Run AppleScript option, and set the pop-up menu to iTunes Remote Control.applescript. Now when you're using your other Mac, you can start a chat with the Mac that's running iTunes and send your commands.



**iTunes Remote Controller** Do you use one Mac to route iTunes through your home stereo? Using Leopard's iChat, you can change songs or pause playback from another Mac in the house.



## POWER TIP OF THE MONTH

### View High Definition Trailers in Front Row



If you have a Mac with Front Row and a fast Internet connection, this tip will let you watch high definition trailers in Front Row. It does require a brief trip to Terminal (/Applications/Utilities), but the command isn't really that complex. (You'll be able to fully appreciate the higher-quality trailers only on a nice large monitor—though they may look somewhat sharper even on a smaller screen.)

First launch Front Row (⌘-escape) and then exit it—this may not be essential, but in my testing, if I hadn't launched Front Row before doing everything else, I didn't seem to get the high definition trailers. Then launch Terminal, enter this command (better yet, copy and paste it from [macworld.com/3225](http://macworld.com/3225)), and press return:

```
defaults write com.apple.frontrow TrailerBypass \
http://www.apple.com/trailers/home/xml/current_720p.xml \
&& killall "Front Row"
```

You've just told Front Row to use the 720p high definition trailers page as its source, instead of the default source. You've also killed Front Row's background process. Launch Front Row and browse the trailers. You'll probably see a smaller selection, as there aren't as many high definition trailers. Select one, though, and you should be rewarded with a very sharp picture.

If you ever want to undo what you've done, just use this command (or copy and paste it from [macworld.com/3225](http://macworld.com/3225)):

```
defaults delete com.apple.frontrow TrailerBypass &&
killall "Front Row"
```

That will remove the preference that points to the high definition trailers, letting Front Row return to its default source.

### Selectively Reset Safari 3

In Apple's Safari 2, the Safari: Reset Safari menu item was definitely a “break glass in case of emergency” kind of feature.

Although it was very useful when you wanted to clear your online tracks, it did so in a big way, wiping out not only your cache, history, and Google search entries, but also your Web-site passwords, cookies, and more. It's easy to miss the fact that Safari 3 ([www.apple.com/safari](http://www.apple.com/safari)) lets you *choose* which items to reset and gives you control over more items (see “Better Brows-

ing Privacy”). I think this is a very good thing, especially since many people report that occasionally clearing out Safari's history, cache, and saved Web-site icons can improve browsing speed.

### Silence Extension Warning

If you're a Web developer, or someone else who frequently manipulates file extensions, you're probably tired of Tiger's constant warnings (“Are you sure you want to change this extension from .tiff to .tif?”). In Leopard, you can disable this feature. Select Finder: Preferences, click on the Advanced tab, and deselect the Show Warning Before Changing An Extension option. While you're in the neighborhood, you can also turn off the Trash warning or set the Trash to empty securely by default. ☒

Senior Editor **Rob Griffiths** runs the MacOSX-Hints.com Web site.



## Macworld 2008 Presentations Now Online and on DVD-ROM!

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The screenshot displays the Macworld Encore DVD-ROM interface. On the left, a sidebar shows the 'MacworldEncore Conference & Expo' logo and a speaker profile for Scott Bourne from Bourne Media Group. The main area shows a video player with a presentation on 'Aperture'. The video frame shows the Aperture software interface with an owl image being edited. The 'Adjustments' panel on the right shows settings for Crop, Exposure, Saturation, Brightness, Contrast, and Levels. Below the video player, a navigation pane lists 'CONFERENCES', 'TRACKS', and 'PRESENTATIONS'. The 'PRESENTATIONS' list includes 'PC - Aperture: Part 01' through 'Part 04', all by Scott Bourne and Derrick Story. A search bar is located at the top right of the navigation pane.

Macworld Encore 2007 DVD-ROM screenshot shown above.

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# Mac 911

Solutions to your most vexing Mac problems **BY CHRISTOPHER BREEN**

## Legible Web Page Printouts

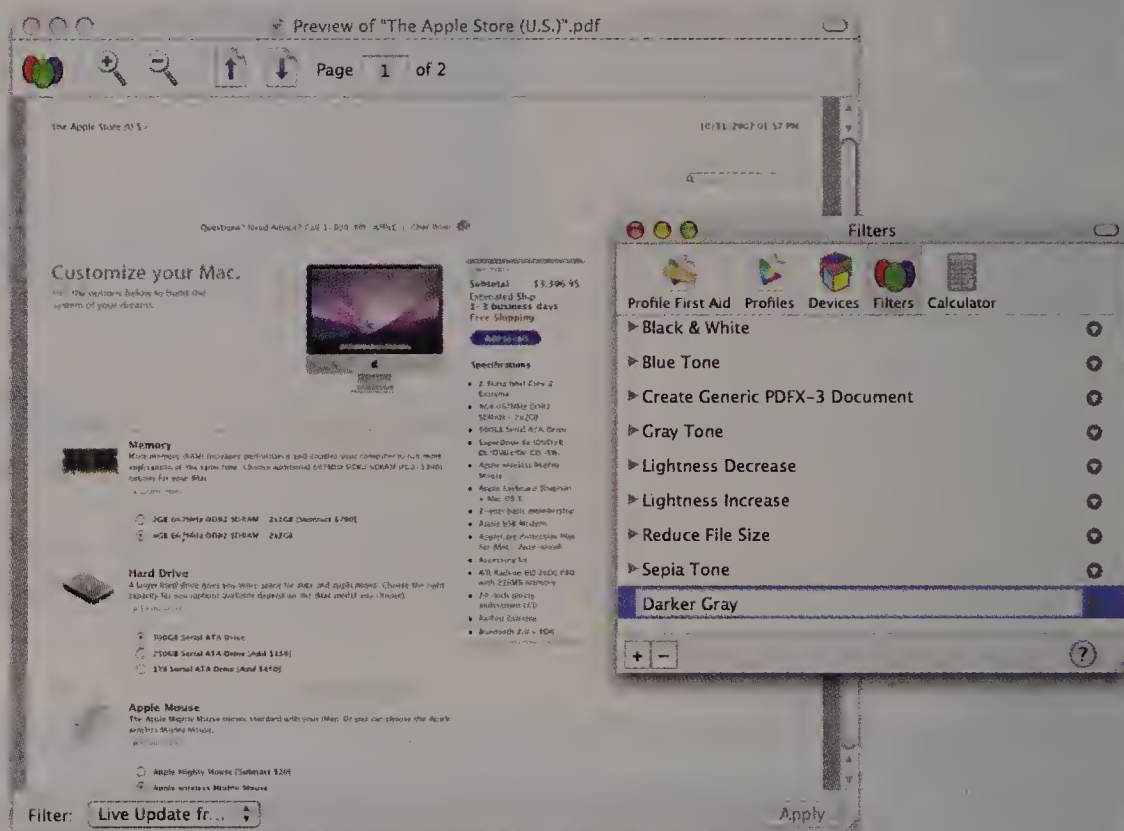
**Q:** How can I make Safari clearly print the light gray text that appears on some Web pages, including Apple's? I often need to print that information, particularly when purchasing software or hardware for work.

**Alberto Hauffen**

**A:** If you're using OS X 10.4 (Tiger), find a Web page you'd like to print and choose File: Print. In the resulting sheet, choose ColorSync from the Copies & Pages pop-up menu. Two pop-up menus will appear—Color Conversion and Quartz Filter. Choose Add Filters from the Quartz Filter pop-up menu.

ColorSync Utility will launch and display a preview of the page. From the Filter pop-up menu at the bottom of the window, choose Lightness Decrease, and notice that the grays on the page get darker (as does everything else on the page). Take a look at some of the other filters, and see if they make the text darker.

If none of the filters please you, you can make one of your own. Choose Live Update From Filter Inspector from the Filter pop-up menu. Click on the area where you see the red, green, and blue ovals in the upper left corner of the window to produce the Filters window. Click on the plus-sign (+) button in the lower left corner of the Filters window to create a new filter. Give



**Improve Web Page Printing** If you're still using OS X 10.4 (Tiger), you can use ColorSync to produce printed Web pages with darker text.

the filter a name such as Darker Gray (see "Improve Web Page Printing").

Click on the triangle symbol that appears next to the profile, and choose Add Color Management Component: Intermediate Transform. In the Intermediate Transform entry that appears, choose Brightness from the Profile pop-up menu, All Data from the All Data pop-up menu, and Text from the All Objects pop-up menu. Adjust the three sliders that appear, and see the effect they have on the page preview. (I've found that dragging the first slider all the way to the left, dragging the second slider all the way to the right, and leaving the third slider in the middle produces better black text.)

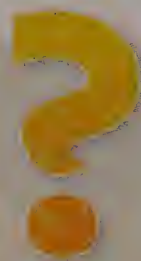
When you find something you like, close the Filters window. When you return to the Print sheet to print your

page, choose ColorSync from the Copies & Pages pop-up menu, and then choose the filter you created from the Quartz Filter pop-up menu.

Unfortunately, OS X 10.5 (Leopard) doesn't allow you to edit ColorSync profiles from the Print dialog box. In that case, you can do things the good old-fashioned way: Copy and paste the text into a text editor such as TextEdit, and then print. When you do this, the text will appear crisp and black.

## Reply Using the Right Account

**Q:** Is there a way to select your outgoing e-mail account automatically based on the recipient? For example, if I send a message to a work colleague, I want the From address to be my work e-mail. However, if I'm e-mailing Uncle Fester or my mother-in-law, I'd like to use my



### Have a problem?

Go to the Mac 911 forum ([macworld.com/2467](http://macworld.com/2467)) for help with your misbehaving Mac or applications.



personal account. I try to remember to switch accounts, but I often forget.

Robert Costain

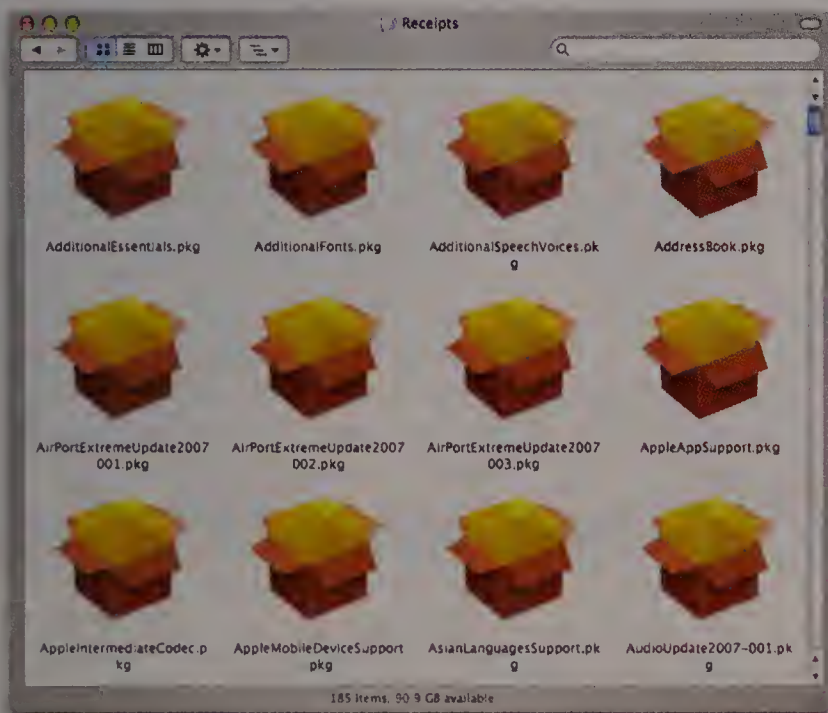
**A:** By default, Apple's Mail will reply using the address to which a message was sent. This means that if Uncle Fester always uses your personal account, your replies will flow back by the same path. But that's not what you're asking for—when you're replying to a message, regardless of which account it was sent to, you want your reply sent from a particular account.

You can get closer to that setup with Microsoft Entourage 2004's rules. Just in case someone sends a message to the wrong address (your uncle e-mails you at work, for example), this rule will direct Entourage to automatically reply using the account you've designated.

Go to Tools: Rules, click on New, and create a set of conditions like this:

**If From Contains sender**  
(where *sender* is your Uncle Fester)  
**Then Change Account name of account**

You can simplify things by creating a group (File: New: Group) made up of those people you'd like to contact from a specific e-mail account—the old high-school mates you're contacting for the next reunion, for example. Then in the rule above, you'd use **Is In Group** instead of **Contains**.



**System Helpers** While the many items you find in the Receipts folder may seem like fodder for the Trash, your Mac will operate better if you leave them alone.



## TOOLS OF THE TRADE

### An Ounce of Protection

Robust as the operating systems that underlie your Mac, iPod, and iPhone may be, they offer no help when your hardware is physically damaged. Here are some add-ons to protect your Apple-branded gewgaws.

**MacBook Pro-tection** My MacBook Pro often turns heads—not because it's doing anything particularly spectacular but rather because of its pleasing shade of green. That hue is brought to me by Speck Products ([www.speckproducts.com](http://www.speckproducts.com)) and its \$50 SeeThru Hard Shell Case for 15-inch MacBook Pro (★★★★; [macworld.com/3186](http://macworld.com/3186)). This plastic case provides protection against minor bumps and all kinds of scrapes.

Now that the outside is, quite literally, covered, give the screen a little help with RadTech's NoteBook ScreenSavrz ([www.radtech.us](http://www.radtech.us)). Priced between \$10 and \$17, depending on the laptop model, this small cloth prevents your keyboard from scratching and denting your display.

**Call Screener** The iPhone and iPod touch's glass displays are pretty rugged, but it's still possible to scratch them up with a pocketful of keys, loose change, or sand. To help protect your device, consider Power Support's \$16 Crystal Film Sets (★★★★; [macworld.com/3203](http://macworld.com/3203)). These are clear polymer sheets—one for the front and another for the back of your iPhone or iPod touch. (Power Support also offers sets for "traditional" iPod models—such as the iPod nano and iPod classic—which scratch more easily than the iPhone and iPod touch.) And because these tough-as-nails sheets adhere via static cling, there's no adhesive to gum up the works.

Regrettably, you can't construct a working Entourage rule that will watch as you enter a recipient in a new message's To field and then automatically switch the account you send from. So outgoing messages you compose can't always be automatically

assigned based on recipient. This rule can only react to messages you've received.

### Save Those Receipts

**Q:** I recently stumbled upon a folder called Receipts. It contains many different packages, and these appear to be related to programs I've installed at one time or another. Is it safe to dump this folder to save room on my hard drive?

T.E. Watson

**A:** The items in the Receipts folder are exactly that, receipts for updates you've installed (see "System Helpers"). OS X's Software Update as well as other programs' updaters drop these files into the Receipts folder (found within the Library folder at the root level of your hard drive) so that when they next look for an update, they know what's already installed. Should you toss out these files, Software Update and other programs may attempt to download and install software you already have—even versions earlier than what you have.

In most cases, it's best to just leave these files alone. They don't take up a lot of space—I've got 191 of the little suckers, and they eat up 258MB—and the confusion caused by trashing them isn't worth it. However, if you suspect that an update didn't "take," you can trick Software Update into giving it to you again by tossing that particular update's receipt. Or if you'd like to have a copy of the updater file, you can move its receipt, open Software Update, enable it for download, and then choose Update: Download Only. The updater downloads to your Mac without installing.



## Incessant Password Prompt

**Q:** A few days ago, my iMac began asking for passwords that I thought it had memorized. I've seen these requests in Microsoft Entourage and Internet Connect. Do memorized passwords expire so that I need to reenter them every so often?

Stan Fields

**A:** Thankfully, no. Those memorized passwords are stored in your Mac's *keychain*, a file that packs away passwords for your programs (including e-mail), servers, Web sites, cryptographic keys, and certificates, as well as form data such as credit card numbers and PINs that you routinely enter in a Web browser.

From the sound of it, your keychain is corrupted. There's a good chance that you can put things right, however. Just launch Apple's Keychain Access (found in Applications/Utilities) and choose Keychain Access: Keychain First Aid. In the resulting Keychain First Aid window, you'll see your user name and an empty password field. Enter your administrator password in that field, and then click on Start.

The Verify option is enabled by default, and that's just what Keychain First Aid will do. If there are problems with the keychain, some red text will appear in the window detailing what's wrong. Enable the Repair option, and click on Start again. Hopefully without requiring *too* much luck, First Aid will repair your keychain. It's possible that you'll still be prompted for a password or two, but once the keychain has been repaired, any passwords you ask your Mac to remember should now stay put.

Because keychains can get mucked up, it's not a bad idea to back them up. You'll find your keychains stored here: *your user folder/Library/Keychains*. Unless you've created a new keychain, the login.keychain file is the one you want to back up. Just option-drag that file to another location to make a copy.

## Flexible Mail Signatures

**Q:** Whenever I inserted a signature using Tiger's Mail, it would appear wherever my cursor was. But in

## Bugs & Fixes BY TED LANDAU



**Lost iWeb '08 Content** Have you installed any third-party add-ons—for example, Clarkwood Software's \$20 Multisite for iWeb 2.0 ([macworld.com/3182](http://macworld.com/3182)) or Chad Brantly's \$13 iWeb Enhancer ([macworld.com/3183](http://macworld.com/3183))—to enhance the features of iLife's iWeb? If so, be careful when updating to Apple's iWeb '08 (🔧🔧🔧🔧; [macworld.com/3084](http://macworld.com/3084)). Apple confirms that part or all of your Web page content may be lost after updating. There's no good workaround here. The best you can do is make sure you have a backup of your content before upgrading.



**iPhoto '08 Can't Read Media Card** If Apple's iPhoto '08 (🔧🔧🔧🔧; [macworld.com/3061](http://macworld.com/3061)) can't read your Olympus digital camera's xD-Picture Card, the reason may be that the card contains an incompatible movie file. One solution is to install the Perian Project's free Perian ([www.perian.org](http://www.perian.org)). This little QuickTime component adds support for many additional movie formats. Just drop it into your /Library/QuickTime folder and restart your computer. The camera's memory card should now mount in the Finder.



**Leopard Login Letdowns** If you can't log in to your account after upgrading to OS X 10.5 (Leopard), it's likely that you have a password with more than eight characters—one that you originally created when using OS X 10.2.8 or earlier. If that's your *only* account, you're going to have to restart in single-user mode (by holding down the

⌘-S key during startup) and follow the instructions found at [macworld.com/3185](http://macworld.com/3185). However, if you have at least one account that you can log in to, the easier fix is to install Login & Keychain Update 1.0. Log in to the accessible account, and select Apple Menu: Software Update to download it.



**MIA Administrator Account** After you install Leopard, you might find that your default administrator (admin) account has become a standard account. If there are no other admin accounts on your computer, there's no easy way to get your administrator powers back. You'll need to restart in single-user mode and follow the prompts to type the commands required to gain write access to the drive. After doing so, type `rm /var/db/.AppleSetupDone` and press return. Next, type `reboot` and press return to restart your Mac. You'll arrive at the Setup Assistant screen. From here, create a new account (using a different name than your old one). After logging in to this new account, which should be an admin account, go to the Accounts preference pane, select your original account, and select the Allow User To Administer This Computer option. Log out, and log back in to your original account.

Senior Contributor **Ted Landau** is the founder of MacFixIt ([www.macfixit.com](http://www.macfixit.com)) and the author of *Take Control of Troubleshooting Your iPhone* (TidBits Publishing, 2007). Share your problems at [bugs@macworld.com](mailto:bugs@macworld.com) or on Macworld.com's Mac 911 forum.

Leopard, Mail inserts signatures at the end of messages, no matter where the cursor is. I've toggled the Place Signature Above Quoted Text option on and off in Mail's Preferences, but that doesn't work.

John Miller

**A:** It's true. Mail now only lets you place your signature below or (if you go to Mail: Preferences, click on the Signatures tab, and choose that option) above the quoted text. You don't have the option to insert the signature at the cursor. It's for this reason that I use

tools such as Ettore Software's \$27 Type-It4Me (🔧🔧🔧🔧; [macworld.com/2582](http://macworld.com/2582)) or SmileOnMyMac's \$30 TextExpander (🔧🔧🔧🔧; [macworld.com/1672](http://macworld.com/1672)) to create signature shortcuts. Using either of these utilities, I can add a signature wherever I like just by invoking a keyboard shortcut that quickly types my templated text. ☒

Senior Editor **Christopher Breen** is the author of *The iPod and iTunes Pocket Guide*, third edition (Peachpit Press, 2007) and *The iPhone Pocket Guide* (Peachpit Press, 2007).



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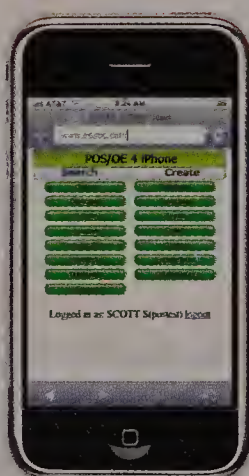
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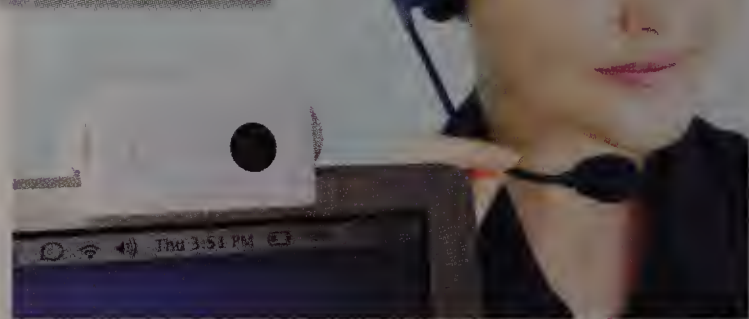


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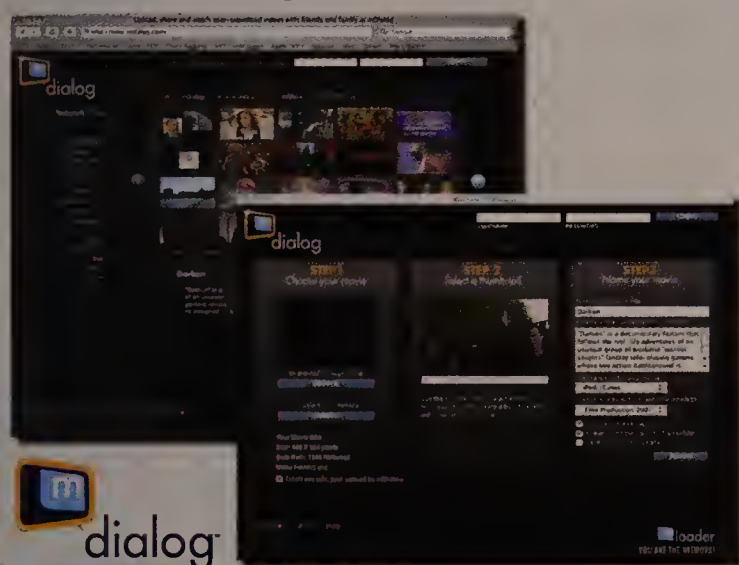
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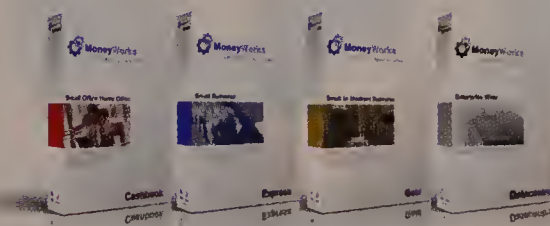
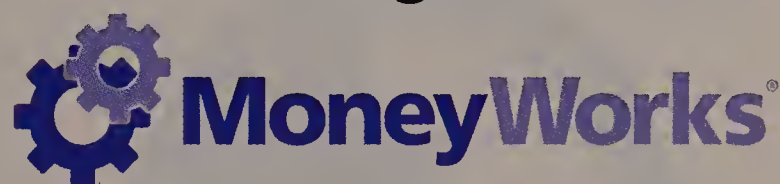
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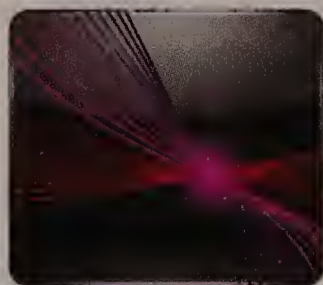
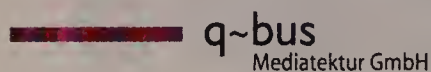
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



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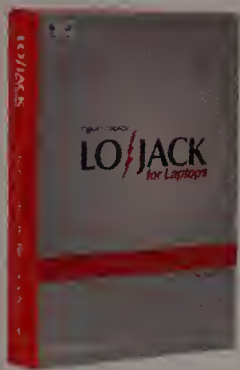


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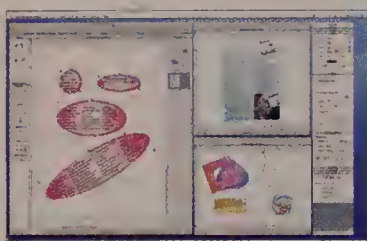
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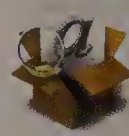
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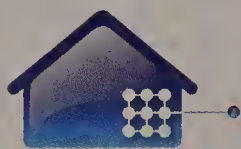


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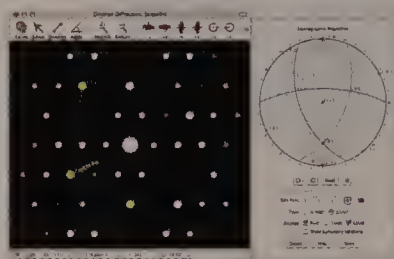


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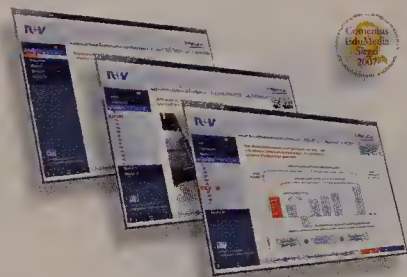
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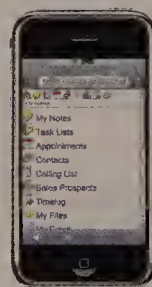


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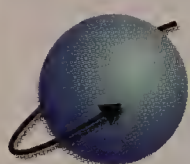


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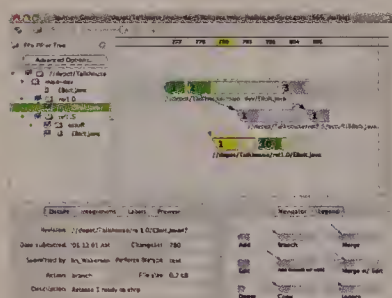
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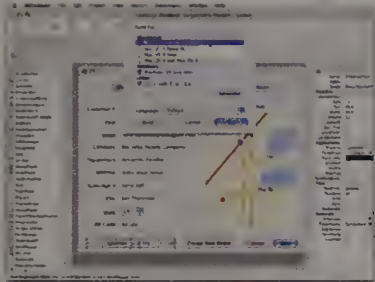
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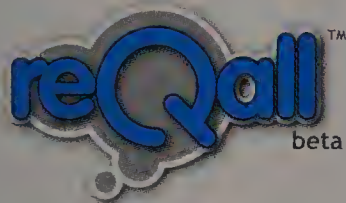
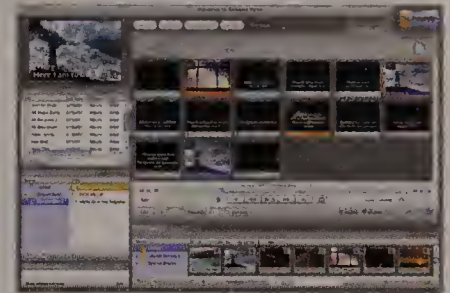
[www.realsoftware.com](http://www.realsoftware.com)

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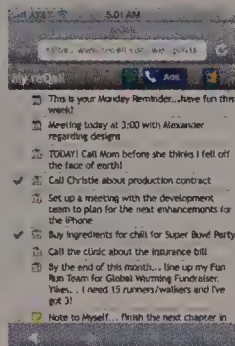
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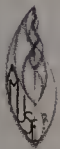


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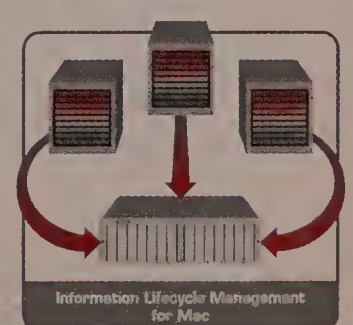


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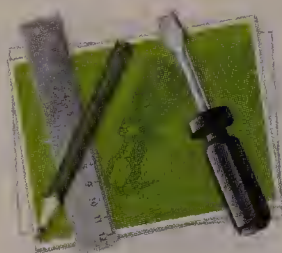
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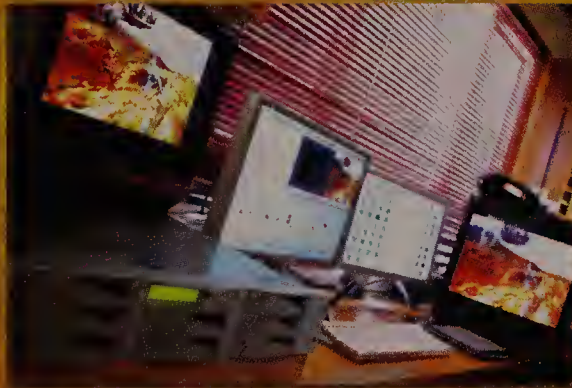
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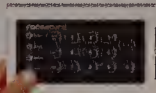
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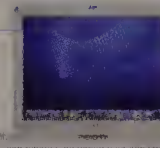


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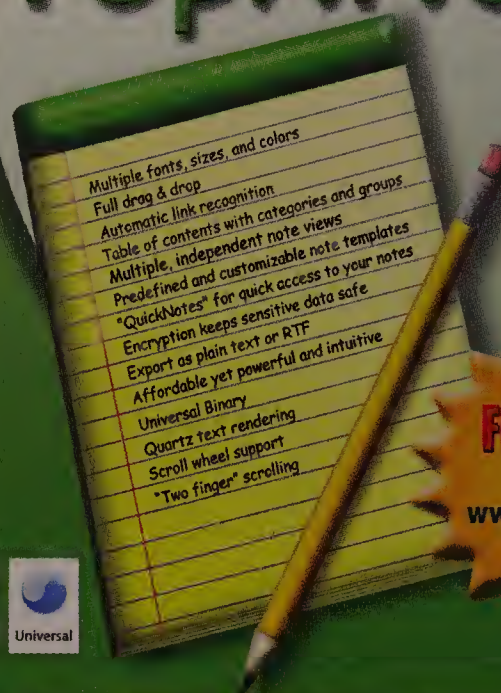


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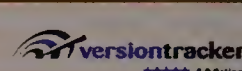
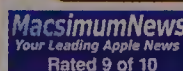
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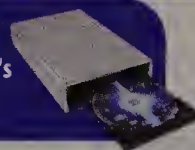
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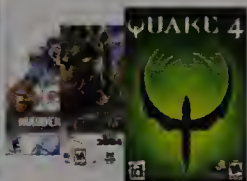
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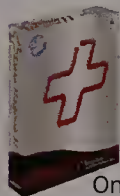
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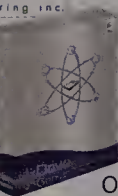
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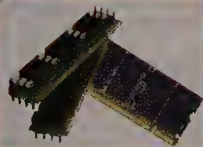


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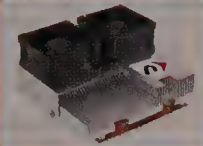
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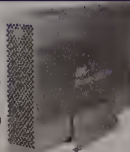
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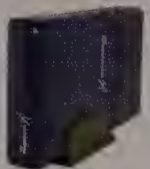
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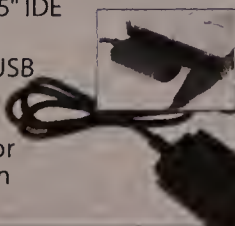
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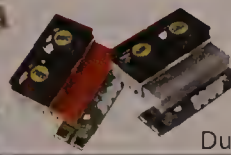
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AmericasPrinter.com	americasprinter.com	151	MacMall	macmall.com	4, 138-139
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Audioengine	audioengineusa.com	143	Mark/Space	markspace.com/syncit	42
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Granite Digital	granitedigital.com	149	Wacom	bamboofunpentablet.com/mwm	27
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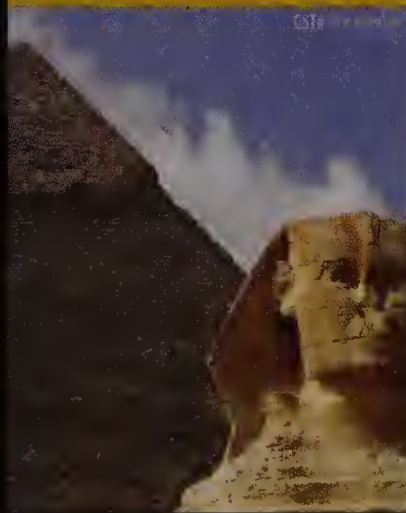
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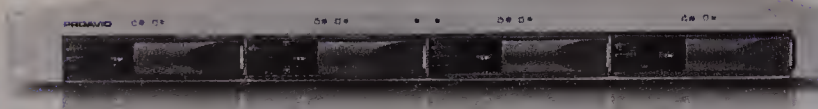
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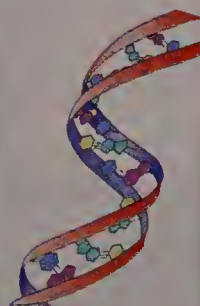
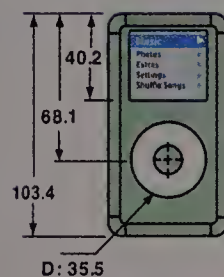
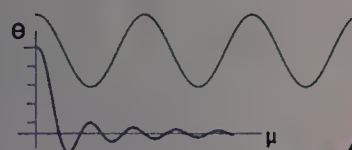
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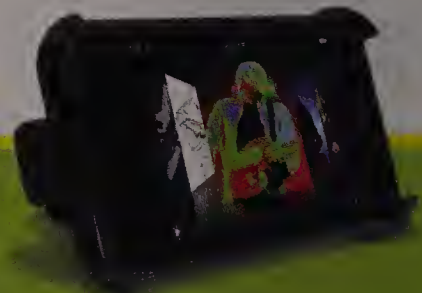
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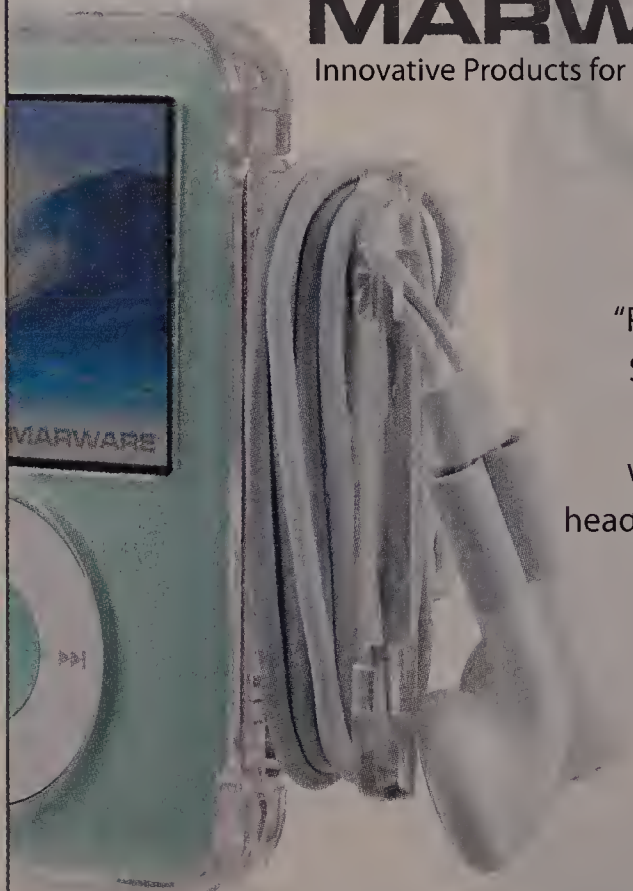
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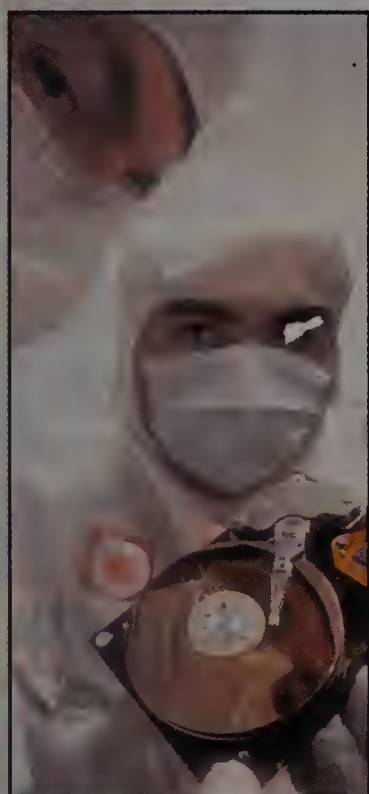
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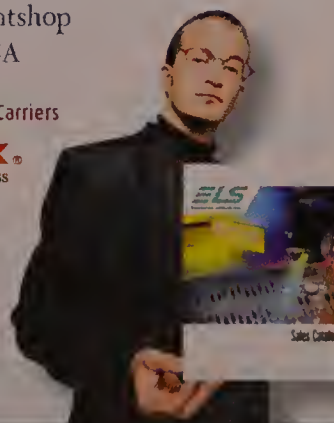
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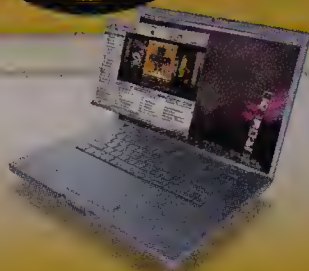
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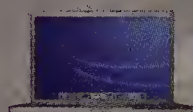
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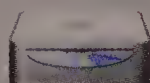
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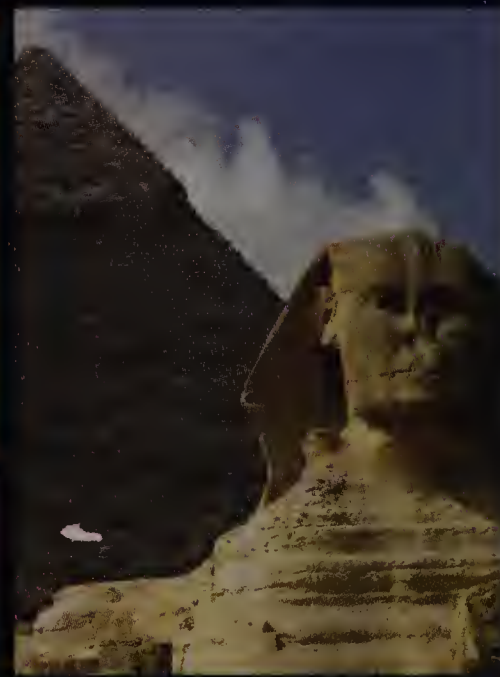
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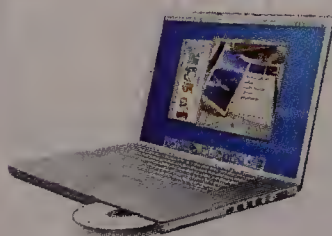
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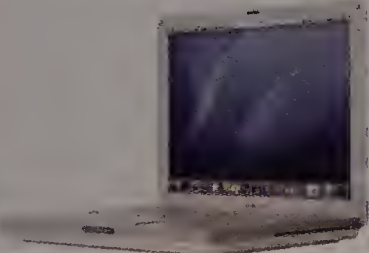
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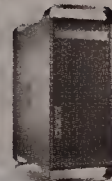
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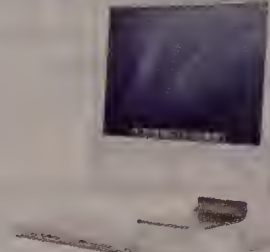
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# Why Mom Should Get Leopard

If you do tech support for family and friends, upgrade their Macs now

If you're reading this page, I'll bet you're the person that family and friends call on for help with their Macs. After all, if you weren't at least a bit fanatical about the Mac (and reasonably skillful with same), you'd likely be skimming *Carburetor Quarterly* instead.

If you are the default tech-support guru for family and friends, chances are you've become increasingly popular since last October 26, the day of Leopard's release. And if your nearest and dearest are anything like mine, they upgraded their rickety Macs the second Leopard shipped (without, I should add, first backing up a speck of data or checking the system requirements on the side of the box). A minute or two later, they probably called you to haul them out of the soup.

The good news is that, while the arrival of Leopard has increased these calls for help, OS X 10.5 also provides some tools that can save you more than a measure of bother.

## Time Machine

My first response in any troubleshooting session is, "No problem, we'll just restore your Mac from your backup." The next step is to watch that day's victim squirm. But once you've witnessed that moment a dozen times or more, the amusement fades. It's time to face facts: The percentage of people who routinely back up their data is about the same as those who regularly floss.

Fortunately, if you're a little sneaky, you may never need to mention the subject again. Leopard's Time Machine means your mother will never have to perform her own backup again. Buy a good-size USB drive (500GB drives are dirt-cheap these days), attach it to Mom's Mac when she's not in the room, hide the drive under a decorative doily, and configure Time Machine. To cover your tracks, choose Finder: Preferences and, in the General and Sidebar tabs, disable the options to show external disks on the Desktop and Sidebar, respectively. This

last bit of subterfuge is to prevent anyone from asking, "What's that green boxy thing on my screen there?" What she doesn't know won't hurt her; when she inadvertently deletes three generations of family photos, what she doesn't know will likely save her bacon.

## Screen Sharing

My side of the typical troubleshooting conversation goes something like this: "OK, so double-click on the hard drive icon . . . no, not the . . . no, listen for a second . . . no, not the thing that looks like a folder . . . no, not in that window . . . what do you mean 'next to the ace of hearts'? Mom, could you quit Burning Monkey Solitaire for a minute and go to the Finder . . . yes, I know the monkeys are funny, but . . ."

Now multiply that ten minutes by the 25 or so times a year you're going to have to repeat it, and compare that to the time it would take to sign Mom up for a free

**When Dad can't find a copy of last year's tax return, initiate iChat's screen sharing.**



AIM account ([www.aim.com](http://www.aim.com)), configure Leopard's version of iChat so you appear in her buddy list, add iChat to her account as a login item, and teach her how to accept your requests to share her Mac's screen with you. If you spend hours providing free tech support, iChat's screen-sharing feature is a godsend. When Mom, Dad, or Cousin Bob can't find a copy of last year's tax return, initiate iChat's screen sharing, suggest they keep quiet so you can do your job, find what they're after, and log off.

## Seeking Help

I know, I know: OS X's Help hasn't always been very helpful, but it's far better in Leopard. For example, when your sister's friend's second cousin calls because he has a paper due *in the next five minutes* and he can't find the command that'll export his data in a form readable by humans, calmly suggest that he click on the Help menu and enter the word *Export*. Leopard's Help will first list any commands within the front-most application that match the search query. Selecting one of these commands in the Help menu brings up a floating blue arrow that points directly at the command, making it really obvious where he needs to click.

Next, suggest he hover his cursor over an Apple-specific technical term you've tossed into an e-mail or iChat exchange and press ⌘-control-D. When the definition appears in a small pop-up menu, have him click on the triangle next to Dictionary and choose Apple to see the company's definition for the word. From now on you can simply say, "Look it up."

In our extensive Leopard coverage in these pages, we've crowed about all the features that make dedicated Mac users' computing life worthwhile—Spotlight, Time Machine, Web Clips, and Quick Look among them. I'd like to add one more: Leopard helps me help others. ✕

**Christopher Breen** is a senior editor for *Macworld*.

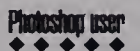


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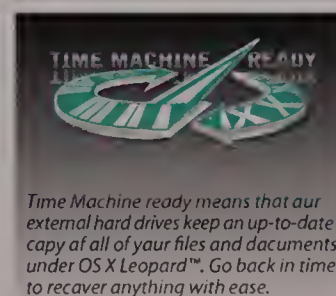
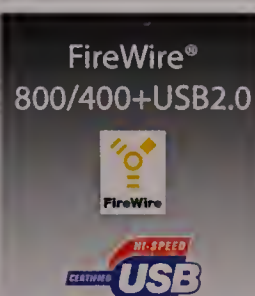
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